FINANCIAL TIMES

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NATIONAL NEWSPAPER OF THE YEAR

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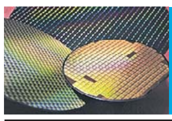
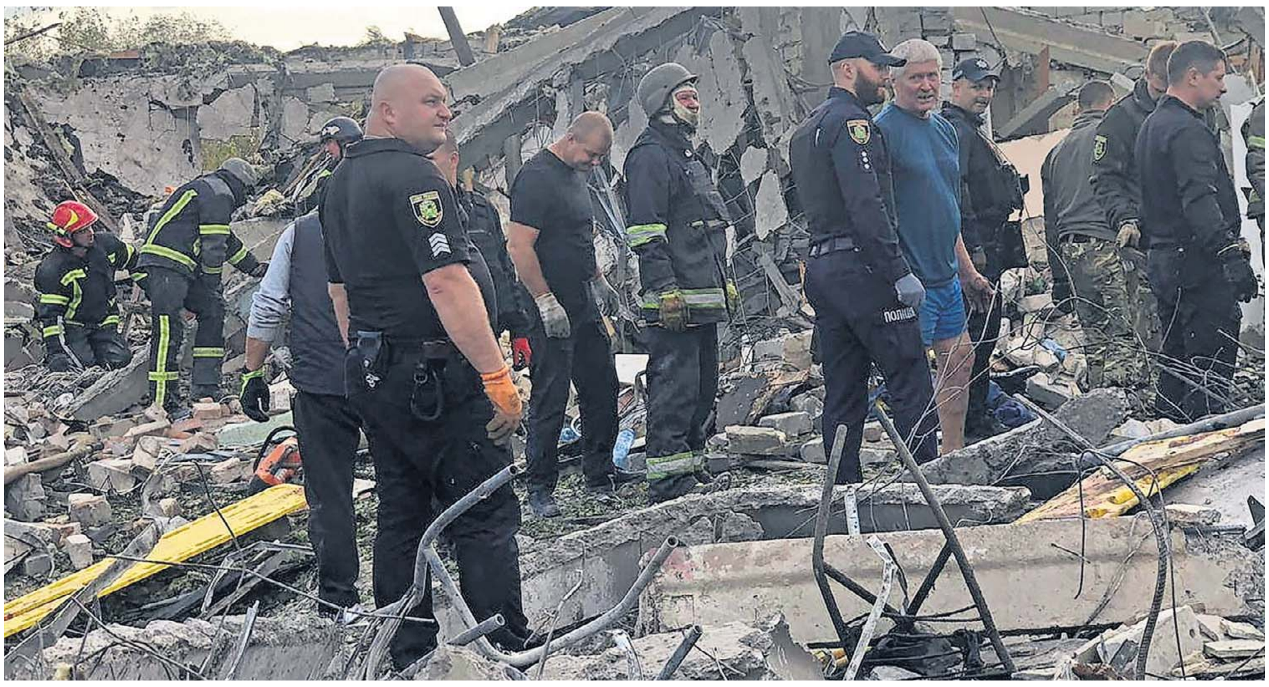


The culture clash frustrating TSMC in the US
BIG READ, PAGE 19

Why I am less confident of a US 'soft landing'
MOHAMED EL-ERIAN, PAGE 12

Russian attack
50 killed in strike on café



Ukrainian Police Press Office/AP

Emergency workers search for victims after a Russian rocket attack killed at least 50 people, including children, in Ukraine's eastern region of Kharkiv yesterday.

In the deadliest attack this year, the Russian missiles hit a grocery store and a café in the village of Hroza, where locals had gathered after a funeral.

The strikes came as Russia said it aims to spend Rbs10.8tn ($108bn) on defence next year, three times the amount allocated in 2021, the last year before the invasion, and 70 per cent more than was planned for this year.

Spain yesterday said it would give Ukraine six new Hawk missile launchers to help "cope with possible Russian bombardment of civilian targets and critical infrastructure" after prime minister Pedro Sánchez met Ukraine's president Volodymyr Zelenskyy.

Russia-Ukraine reports page 4

Briefing

▸ Allowances freeze to reap extra £40bn in tax revenue
Research by the Resolution Foundation think-tank for the FT has shown that Rishi Sunak's multiyear freeze to income tax thresholds will result in a bumper tax haul for the Treasury thanks to stubborn inflation.— PAGE 2

▸ Labour resists HS2 call
Party leader Sir Keir Starmer has refused to commit to reversing the government's decision to axe the line beyond Birmingham, in effect delivering a coup de grâce to the northern branch.— PAGE 3

▸ Alstom cash flow blow
Shares in the French high-speed train maker have plunged more than a third after it slashed its forecast for free cash flow, partly due to delays in the UK's Aventra programme.— PAGE 7; LEX, PAGE 22

▸ Ofcom starts cloud probe
The regulator has referred the $500bn cloud computing sector to the competition watchdog for an antitrust investigation, after finding Microsoft and Amazon dominated the market.— PAGE 10

▸ US failure on climate cash
Splits in Congress over shutdown battles have stymied efforts to contribute to the UN fund for tackling climate change in poorer nations. Some $9.3bn was pulled in from 25 other countries.— PAGE 6

▸ JPMorgan loans shake-up
The US bank has stepped up the pace at which it is securitising billions of dollars of its portfolio to prepare for new capital rules. The effort centres on products at retail business Chase.— PAGE 8

▸ Disney offers free cricket
The US entertainment group has offered free mobile streaming of the sport's World Cup in India as it struggles for supremacy with billionaire Mukesh Ambani's homegrown JioCinema.— PAGE 7

▸ Fosse wins Nobel Prize
Norwegian writer Jon Fosse, who has been celebrated for his spare, cryptic and haunting stories, has taken this year's literature award. The committee said he had given "voice to the unsayable".— PAGE 6

Metro offers rivals slice of mortgage book in bid to shore up balance sheet

● Lloyds, NatWest and HSBC approached ● Push to raise up to £600mn ● Plan knocks 30% off shares

LAURA NOONAN, STEPHEN MORRIS AND ROBERT SMITH AND OLIVER RALPH

Metro Bank is sounding out rivals about buying a third of its mortgage book to help bolster its balance sheet, as the lender's chair met financial watchdogs following news of a plan to raise up to £600mn.

Shares in Metro, the first of a crop of challenger banks that pledged to ignite competition on the high street after the financial crisis, fell nearly 30 per cent after media reports that it aimed to raise up to £250mn in equity funding and £350mn of debt.

The bank is also considering selling about £2.3bn of its £7.5bn mortgage book to raise funds and reduce its capital requirements, three people familiar with the matter said. It has approached larger peers to gauge interest, including Lloyds Banking Group, NatWest and HSBC, two of the people added.

"They are attractive prime assets, so it will just come down to price," said one.

Robert Sharpe, Metro's chair, was called in to meet officials from the Bank of England's Prudential Regulation Authority and Financial Conduct Authority, according to two people familiar with the situation. They said the meeting was the latest in a series of contacts between regulators and the bank over the past month as its share price almost halved.

> 'They are attractive prime assets, so it will just come down to price'
> Banking insider

Metro revealed three weeks ago that the PRA had delayed approval of a plan to let it run its mortgage business at a lower cost.

Sharpe "attended a longstanding, prediarised meeting with the PRA this morning", Metro said yesterday, without clarifying when the meeting was scheduled or what was discussed.

The FCA and the PRA declined to comment on their dealings with Metro, which has 76 branches, 2.8mn customers and assets of £21.7bn, according to its most recent set of financial accounts.

Metro said it was "evaluating the merits of a range of options, including a combination of equity issuance, debt issuance and/or refinancing and asset sales".

Metro's top shareholder is Colombian billionaire Jaime Gilinski, through his Spaldy Investments vehicle. He did not respond to requests seeking comment.

Rating agency Morningstar said it did not "expect the difficulties being experienced by Metro Bank to have a broader impact on the UK financial sector given its relatively small size and the specific issues the bank has experienced".

Metro was at the centre of a misreporting scandal in 2019 when it materially under-reported the risk of its book. The episode led to the swift exit of its chair and chief executive. The FCA later fined the bank and censured the former chief executive and finance boss.

Rating agency Fitch put Metro on negative watch on Wednesday, citing increased risks to its business model, capital position and funding.

Metro spent five years seeking permission from regulators to use its own models to estimate the riskiness of its mortgage book, which would have boosted its profitability.

Dan Frumkin, Metro's chief executive, told the Financial Times in August that it remained the issue that "comes up in the majority of conversations with debt and equity investors".

Metro's market value hit a record low of £64mn yesterday after its share price fell 14.40p to 36.10p, compared with an all-time high of £3.5bn five years ago. The price of a £350mn Metro bond due in 2025 also dropped 12.6p to a record low of 57.4p.

World on watch as threat from bond rout intensifies

Any institution that had loaded up on debt in recent years faces potentially heavy losses as a global bond sell-off worsens. Investors are on the lookout for signs of pain across the financial system. Paper losses on the opaque bond portfolios of US banks have been put at $400bn. Insurers and pension funds fear having to sell bonds at a loss and corporate debt markets are on alert for higher yields feeding through.

Trouble ahead ▸ PAGE 9
Gillian Tett ▸ PAGE 21

China's Alibaba under scrutiny over 'possible espionage' at European hub

LAURA DUBOIS — LIÈGE
QIANER LIU — HONG KONG

Belgium's intelligence service has been monitoring Alibaba's main logistics hub in Europe for espionage following suspicions that Beijing has been exploiting its growing economic presence in the west.

European governments have been increasing scrutiny of the alleged security and economic risks posed by Chinese companies as part of a wider reassessment of the EU's traditional openness to trade with China.

In specific reference to Alibaba's logistics arm at the cargo airport in Liège, Belgium's security services told the Financial Times that they were working to detect "possible espionage and/or interference activities" carried out by Chinese entities "including Alibaba".

Alibaba, which denies wrongdoing, signed an agreement with Belgium in 2018 to open the hub in Liège, Europe's fifth-biggest cargo airport, ploughing €100mn into the ailing economy of the French-speaking Walloon region.

But almost two years on from the site being opened, the Belgian State Security Service (VSSE) has continued monitoring Alibaba operations following intelligence assessments, said people familiar with the matter. One area of scrutiny includes the introduction of software that collates sensitive economic data.

The security service said the presence of Alibaba "constitutes a point of attention for the VSSE" because of legislation forcing Chinese companies to share data with Beijing authorities and intelligence services. "China has the intent and capacity to use this data for non-commercial purposes," the agency said.

Belgium's justice minister Vincent Van Quickenborne told the FT that the early negotiations with Alibaba were from "a former century", adding that "times of naivety have changed".

The Liège site is the only European centre run by Alibaba's logistics spin-off Cainiao. It denied any wrongdoing. "We are in compliance with all laws and regulations, including GDPR," the company said, referring to the EU's data protection regulation.

One possible espionage risk relates to Cainiao's logistics software. "The main concern is that this platform . . . is giving them a lot of insights into supply chains and into eventual vulnerabilities," said Jonathan Holslag, professor at Vrije Universiteit Brussel.

A person with knowledge of Alibaba's ties to Beijing said hubs were expected to pass on information.

World Markets

STOCK MARKETS

	Oct 5	Prev	%chg
S&P 500	4234.11	4263.75	-0.70
Nasdaq Composite	13130.11	13236.01	-0.80
Dow Jones Ind	32957.00	33129.55	-0.52
FTSEurofirst 300	1750.83	1746.84	0.23
Euro Stoxx 50	4101.05	4099.85	0.03
FTSE 100	7451.54	7412.45	0.53
FTSE All-Share	4031.93	4010.91	0.52
CAC 40	6998.25	6996.73	0.02
Xetra Dax	15070.22	15099.92	-0.20
Nikkei	31075.36	30526.88	1.80
Hang Seng	17213.87	17195.84	0.10
MSCI World $	2810.86	2799.64	0.40
MSCI EM $	927.86	939.16	-1.20
MSCI ACWI $	646.27	644.80	0.23
FT Wilshire 2500	5505.34	5462.79	0.78
FT Wilshire 5000	42876.20	42549.50	0.77

CURRENCIES

Pair	Oct 5	Prev	Pair	Oct 5	Prev
$/€	1.053	1.049	€/$	0.950	0.953
$/£	1.216	1.212	£/$	0.822	0.825
£/€	0.866	0.866	€/£	1.155	1.155
¥/$	148.605	148.955	¥/€	156.489	156.291
¥/£	180.697	180.466	£ index	80.452	80.292
SFr/€	0.963	0.965	SFr/£	1.111	1.114

CRYPTO

	Oct 5	Prev	%chg
Bitcoin ($)	27476.03	27794.63	-1.15
Ethereum	1618.28	1645.40	-1.65

COMMODITIES

	Oct 5	Prev	%chg
Oil WTI $	82.57	84.22	-1.96
Oil Brent $	84.16	85.81	-1.92
Gold $	1818.95	1822.45	-0.19

GOVERNMENT BONDS

Yield (%)	Oct 5	Prev	Chg
US 2 yr	5.04	5.09	-0.05
US 10 yr	4.71	4.75	-0.04
US 30 yr	4.88	4.87	0.01
UK 2 yr	4.62	4.65	-0.02
UK 10 yr	4.70	4.73	-0.03
UK 30 yr	4.96	4.95	0.01
JPN 2 yr	0.06	0.06	0.00
JPN 10 yr	0.80	0.80	0.00
JPN 30 yr	1.83	1.82	0.02
GER 2 yr	3.14	3.18	-0.04
GER 10 yr	2.88	2.92	-0.04
GER 30 yr	3.10	3.12	-0.02

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Data provided by Morningstar

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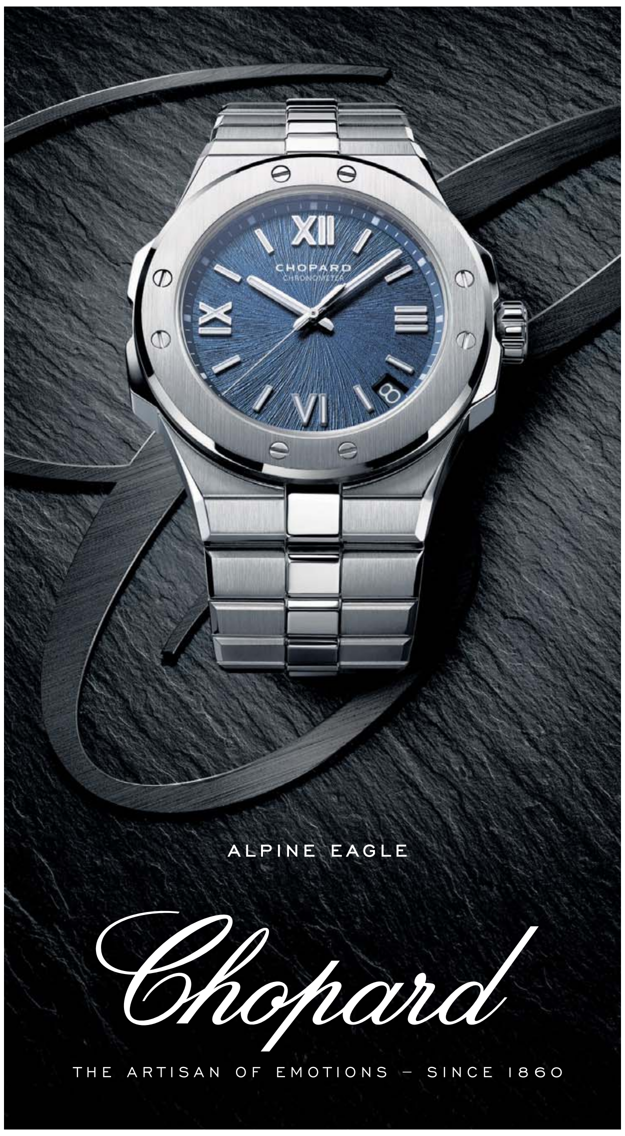

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'Fiscal drag'

Tax threshold freeze to net £40bn a year

Lingering inflation and rising salaries will boost Treasury's coffers by 2028

JIM PICKARD AND SAM FLEMING

The extra tax haul from Rishi Sunak's multiyear freeze to income tax allowances and thresholds is set to reach £40bn a year by 2028 thanks to stubborn inflation — £10bn more than estimated just a few months ago — according to new research.

The calculation by the Resolution Foundation think-tank for the Financial Times demonstrates how the prime minister is quietly securing vastly higher tax revenues from the public through a process called "fiscal drag".

When the Treasury freezes income tax thresholds at a time when people's salaries are rising, as they are amid the highest inflation for a generation, its revenues increase.

"Abandoning the usual uprating of tax thresholds is a tried and tested way governments of all stripes raise revenues in a stealthy way. But it is the far bigger than anticipated scale of the government's £40bn stealth tax rise that stands out," said Adam Corlett, principal economist at the Resolution Foundation.

He added that any talk of tax cuts in the run-up to next year's election should be seen in the wider context of these stealth tax rises.

Sunak was chancellor in 2021 when he announced a four-year freeze in income tax allowances and thresholds along with freezes to inheritance tax and national insurance thresholds.

At the time the Treasury expected the move to raise £8bn a year by 2026. But by the 2022 spring Budget, the Office for Budget Responsibility, the fiscal watchdog, had revised the annual figure upwards to £18bn owing to inflation.

> 'Abandoning uprating is a tried way governments of all stripes raise revenues in a stealthy way'

In March this year the OBR further lifted the estimate to £29bn a year, equivalent to a 4p rise in the headline rate of income tax, from 2028. That partly reflected inflation but also the fact that Chancellor Jeremy Hunt last autumn extended the thresholds freeze for a further two years.

The relentless rise of inflation has pushed up the number of people who will be sucked into higher income tax brackets and of low earners forced to pay the levy for the first time.

The Resolution Foundation estimates that fiscal drag will deliver £40bn a year by the end of the freeze in 2028, the biggest income tax rise in at least half a century.

At the time of the Budget in March, the OBR expected inflation to drop to 5.4 per cent by September 2023, the point at which tax thresholds are usually uprated in the following tax year. But the latest Bank of England forecast from August pointed to a rate of 6.9 per cent for September. The BoE has also recently forecast a total of 6 per cent inflation from Q3 2023 to Q3 2026 — compared with the OBR spring forecast of just 1 per cent in that period.

"At the time of the Budget in March, this policy was set to raise £30bn in 2027-28 — already vastly more than originally forecast," the Resolution Foundation said.

"But using the [BoE's] latest inflation forecasts, the foundation calculates that the policy will raise £40bn a year by the time it is fully rolled out in 2027-28."

People start paying income tax when they are paid £12,570 a year, a figure that will stay the same until April 2028. If that threshold were uprated by the inflation rate expected over this period, it would rise to about £16,200.

The Treasury said the government was determined to halve inflation rather than borrow to fund tax cuts.

Antisemitism report

Labour legal bill for battle over leak set to exceed £2mn

JANE CROFT AND JIM PICKARD

The Labour party has spent £1.4mn in legal fees on a dispute with five former staff accused of leaking an internal report, and expects to spend another £868,000 as the case progresses, according to a court document seen by the Financial Times.

Labour is suing the former employees, including Jeremy Corbyn's former director of communications, Seamus Milne, and his chief of staff, Karie Murphy. The individuals deny leaking the report by the party's governance and legal unit into antisemitism claims against some Labour members.

The party claimed the former staff were legally responsible for leaking the report on April 11 2020, just days after Sir Keir Starmer replaced Corbyn as leader. Labour is concerned about the spiralling costs of the legal case and the distraction it poses as the party prepares for a general election likely next year.

The case was expected to go to trial next year. But at the High Court this week, Labour sought to delay the civil trial until after the general election. The ruling on whether the case should be delayed has been adjourned until December.

The 860-page report, called The Work of the Labour Party's Governance and Legal Unit in Relation to Antisemitism 2014-19, claimed that attempts by the party to tackle complaints had been hampered by factional hostility.

The report was compiled during Corbyn's leadership to be submitted to an investigation by the equalities watchdog, the Equality and Human Rights Commission.

The report included private comments from Labour officials criticising Corbyn and his aides and revealed instances of alleged sexism and racism.

The five former staff being sued by Labour also include Georgie Robertson, Harry Hayball and Laura Murray.

An investigation by the Information Commissioner's Office, which polices data breaches, and an internal probe by lawyer Martin Forde KC were unable to identify the source of the leak.

Anya Proops KC, representing the Labour party, sought to delay the trial until after January 2025, the date by which the next general election must be held, arguing that without a delay there was a "greater risk of this adversely clashing with the general election".

Proops argued that the party, "in particular its in-house legal team — will inevitably face extraordinarily intense demands on its time, focus and resources generally in the run-up to and at the time of the election".

The five former employees have already incurred substantial costs and face further "budgeted legal costs of £1.1mn", according to Proops' written arguments. According to the documents, Labour's legal costs have reached £1.4mn — with a further potential £868,000 expected.

Labour did not dispute the figures. "The party has conducted a wide-ranging and appropriately thorough investigation following the leak and is confident of the case it has presented to the court," it said.

Barrister Jacob Dean, acting for the five individuals, argued against a postponement and claimed the lawsuit had "understandably caused very serious distress" to his clients.

On reflection

Kapoor mirror sculpture up for auction

A wall mounted mirror sculpture by British-Indian artist Anish Kapoor is expected to fetch up to £800,000 when it goes on sale later this month.

'Untitled', signed and dated 'Anish Kapoor 2012' on the reverse, is currently on display at Phillips' London auction house ahead of its Frieze Week 20th and 21st Century & Contemporary Art Auctions on October 12 and 13.

The sculpture is made out of copper, which Kapoor lacquered on the sides and back in deep red tones. A Phillips spokesman said: "Seen from a distance the copper disc appears to float suspended before us, its gently undulating surface shifting like the rising sun."

Guy Bell/Shutterstock

Disclosure regulations

Crypto firm Copper met Treasury officials after Hammond call

CYNTHIA O'MURCHU
INVESTIGATIVE REPORTER

Cryptocurrency firm Copper secured a meeting with Treasury officials after a weekend phone call between a government minister and former chancellor Lord Philip Hammond, then an adviser to the company.

The crypto company was invited to meet finance ministry civil servants in February 2022, within days of a conversation between Hammond and John Glen, then economic secretary.

Glen, who has since been promoted to chief secretary to the Treasury, was "keen for Treasury to engage", according to documents obtained via a freedom of information request.

The call between Hammond and Glen did not have to be publicly listed in routine government transparency publications, nor did the meeting because no ministers attended, highlighting what campaigners have described as weaknesses in government disclosure rules.

During the meeting, Copper highlighted the need for "public assurances" that the UK welcomed crypto businesses, the documents show. At the time, Copper faced difficulties obtaining a full licence to trade in Britain, having been granted a temporary licence by the Financial Conduct Authority in late 2020.

The phone call between Hammond and Glen occurred after the end of his standard two-year ban on lobbying government imposed on ministers when they leave office. Hammond told the Financial Times that "as a matter of principle" he did not ask Glen, a former colleague whom he counted as a friend, to set up a meeting for Copper.

Sue Hawley, executive director of Spotlight on Corruption, a campaign group that obtained the emails and notes around Copper's meetings with the Treasury, said they showed that transparency rules needed to be strengthened. "Informal contacts and policy engagement such as this must be better reflected in government transparency returns so that the public can understand who is influencing government policy," she said.

The independent Committee on Standards in Public Life, the ethics watchdog, recommended in 2021 that informal approaches that are given substantive consideration by government officials should be included in the transparency publications.

Weekend chat: former chancellor Philip Hammond's call did not have to be listed under transparency rules

Its recommendation was echoed by the Boardman review, launched following the Greensill lobbying scandal in 2021, which found that "even a single, brief conversation with a . . . former colleague on a sensitive subject should be considered for disclosure".

In response, the government said in July this year that it would widen transparency disclosures to include diarised phone calls. But it noted impromptu phone calls alone did not "evidence a substantive lobbying engagement" and would not need to be disclosed unless such an informal approach was granted government time and resources.

Few details of what was discussed in the meetings between the Treasury and Copper are public. The documents released were redacted, with the government citing exemptions to FOI laws around commercial confidentiality and government policy decision-making.

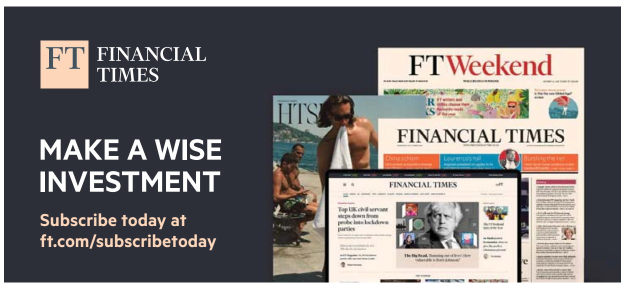
But a readout of the meeting shows that when Treasury officials asked Copper what the UK could do to support its growth, the company suggested "public assurances that crypto/blockchain businesses are welcome in the UK".

In June 2022, Copper withdrew its FCA application, having been granted a registration under Switzerland's anti-money laundering regime, where companies are overseen by self-regulatory bodies.

Hammond — he now chairs Copper — in January blamed the FCA's slowness for Copper's decision to relocate its client base to Switzerland, warning that the UK was falling behind EU countries as a financial centre for digital assets.

The FCA, which supervises cryptoasset firms under anti-money laundering regulation, declined to comment on individual companies but said the "number of good quality applications" it received continued to be low.

The Treasury said it met "many crypto firms every year to help understand the sector and shape best policy that is proportionate and safe. The independent FCA is responsible for authorising individual companies and no one at the Treasury would seek to influence this process." Copper did not respond to requests for comment.



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Supply chains

Retailers warn on divergence from EU deforestation rules

MADELEINE SPEED
CONSUMER INDUSTRIES REPORTER

Supermarkets have warned the government that efforts to rid their supply chains of products linked to deforestation will be derailed unless it aligns with EU rules due to take effect at the end of 2024.

In a letter seen by the Financial Times, retailers including Tesco and Marks and Spencer yesterday urged environment secretary Thérèse Coffey to speed up legislation that will force companies to ensure their direct and indirect suppliers have "deforestation-free supply chains".

The supermarkets, which included Asda, Lidl and Wm Morrison, said they had 15 months to meet Brussels' regulations aimed at curbing the destruction of the world's forests or risk their ability to export British produce to Europe.

From the end of next year, EU countries will refuse imports of goods linked to deforestation, including soya, cocoa, coffee, palm oil and wood. Under the same new rules, companies operating in the bloc will be legally obliged to prove their goods have not been produced on land that has been deforested since 2020. Under the 2021 Environment Act, the post-Brexit legal basis for environmental protection, the government pledged to ban the use of commodities linked to "illegal deforestation" as defined by producer countries.

However, the secondary legislation that would compel companies to comply has yet to be introduced.

"Our British supply chains remain uniquely exposed because of the lack of a legislative process in the UK," the supermarkets wrote, adding that contributors of raw materials to their supply chains were "unwilling to provide the necessary transparency" without a legal requirement.

The retailers called for swift implementation of the legislation, "to remove the remaining barriers to transparency and to level the playing field throughout the sector".

Will Schreiber, a spokesperson for the group of retailers and director at climate consultancy 3Keel, said it was "not cost-effective for a British business to have two different due diligence systems".

Destruction: palm oil plants beside a burnt forest in Indonesia — Willy Kurniawan/Reuters

Soya is one of the crops that contributes most to global deforestation and is primarily used in animal feed. In the UK, the feed industry is not legally obliged to disclose which importer it procured its soya from, or which country.

In August, the Agricultural Industries Confederation, a trade body, began a consultation into its sustainability standards for deforestation, which will inform an industry-led soya transition.

While the EU requires every single material to be verified deforestation-free, the AIC has proposed a "mass balance" accounting system that does not require a single soyabean to have physical verification.

Environmental groups have warned that divergence in standards could leave the UK a "dumping ground" for soya turned away from European markets.

The Department for Environment, Food & Rural Affairs said it was committed to implementing the provisions of the Environment Act "at the earliest opportunity". The AIC did not respond to requests for comment.

NATIONAL

Scepticism greets Sunak pledges for north after plug pulled on HS2

PM gambles on series of transport schemes but polling shows voters may not trust government

JENNIFER WILLIAMS — MANCHESTER

When Rishi Sunak announced on Wednesday that he was scrapping the multibillion-pound HS2 high-speed railway line to Manchester, while standing in a former train station in the same city, the immediate cry from northern leaders and businesses was one of betrayal.

The prime minister and his aides, however, use focus groups to test their policies and have calculated that a series of local transport schemes across the country will prove more popular than the project, which was not due to be delivered for many years and was already wildly over budget.

Nevertheless, polling and political analysts highlight that although the HS2 line, which has been scrapped north of Birmingham, was not particularly popular, northern voters might not trust what they are hearing from the government.

"There's the symbolism of it," said Rob Ford, professor of political science at the University of Manchester, of why the announcement "may land badly".

"This is still the parliament that resulted from votes loaned to the Tories by voters in the north and midlands, who have always assumed, when it comes to the crunch, they will be thrown under the bus.

"This looks like a Tory PM saying 'crunch time has come and I'm throwing you under the bus' — so it confirms their worst suspicions."

A loss of support for the government's transport plans would be a concern for Sunak as he seeks to rally voters for the general election expected next year.

> 'This looks like a Tory PM saying "crunch time has come and I'm throwing you under the bus"'

Polling has long shown that HS2, originally conceived under the last Labour government, was not particularly popular. Only three or four out of 10 people tend to express support for the project, with the numbers not much higher in the north.

However, said Ford, perceptions depended on how the question was framed. Polling produced for West Midlands mayor Andy Street, on the eve of Conservative party conference, showed that more than three-quarters of voters thought the disruption and money spent on the first phase of HS2 would have been wasted were it to be cut off at Birmingham.

The decision has nonetheless proved popular among some northern Conservative politicians, who believe people — in particular outside the north-west — are more interested in improvements directly in their neighbourhood.

Burnley's Conservative MP, Antony Higginbotham, said: "No one talks to me about HS2 on the doorsteps of Burnley."

Meanwhile Tees Valley mayor Ben Houchen posted on X, formerly Twitter, that the announcement meant "more money to deliver real transport projects that will actually deliver real change for people across Teesside and the north", adding: "If HS2 went ahead, we would get nothing."

Anthony Smith, chief executive of Transport Focus, which represents passengers across the country, said it was difficult to know how transport users would respond to the newly proposed projects. "I think people will need to see more detail about what, when and how — and what it's going to mean for them," he said.

But, he added, HS2 had been designed to solve the problems most often raised by rail users: "Basic things like frequency, reliability and capacity."

Electrification projects, which comprise many of the schemes in Sunak's transport plan, were more disruptive than building a new railway line, he argued, because they resulted in years of rail replacement bus services.

Andy Westwood, professor of government practice at the University of Manchester, said ministers had nonetheless calculated that HS2 was "quite hard to understand" and "far into the future".

People were experiencing disruption from the HS2 project now, while the benefits seemed "intangible", he said. "Whereas if you're constantly stuck in traffic in the middle of Shipley and someone suggests 'we will build a bypass', you understand it."

That did not mean the trade-off was a "good idea", he said, adding that voters might greet the latest promises with scepticism anyway. Since 2010, Conservative ministers have promised a string of high-profile transport projects that have not been delivered, particularly in the north of England. "People are deeply sceptical about all of that and that does feed the narrative that 'nothing works, they've promised the earth but my day-to-day life is expensive and rubbish'," added Westwood.

> 'If HS2 went ahead, we would get nothing'
> **Ben Houchen, Tees Valley mayor**

The polling for Street, carried out by Portland Communications, showed most people would be less likely to trust future transport promises if HS2 was cut off at Birmingham.

That narrative may be boosted by confusion over the plan's contents in the 24 hours after Sunak made his speech.

While the original list of projects included the reopening of the Leamside railway line in the north-east, long a priority for local leaders, by the following afternoon it had been deleted. Transport minister Richard Holden said the government was "committed to looking into" the idea.

An official said the rail line could potentially be funded out of money being devolved to local leaders.

Ford said the individual transport projects in isolation might well prove popular, "but nobody is going to believe it". "That's also very dangerous because it plays into this broader narrative that this is a Tory government that promises anything and everything and doesn't actually deliver anything, ever."

Protest: a faded Stop HS2 sign on a gatepost near Knutsford, south of Manchester. Below, Andy Street
Phil Noble/Reuters; Charlie Bibby/FT

Labour party
Starmer declines to save line beyond Birmingham

Sir Keir Starmer has delivered an effective coup de grâce to the northern leg of the HS2 high-speed rail line as he refused to commit to reversing Rishi Sunak's decision to axe the line beyond Birmingham.

The Labour leader said that the prime minister's handling of HS2 had been "a fiasco" but, asked whether a Labour government would save the project, he said: "I can't stand here and commit to reversing that decision."

Sunak on Wednesday cancelled the northern leg of HS2 from Birmingham to Manchester, claiming it would save £36bn that would instead be spent on different road and rail schemes.

Starmer suggested in a round of interviews before Labour's party conference in Liverpool that Sunak's decision marked the point of no return for HS2.

"They've just blown a massive hole through it and are about to start cancelling contracts, releasing the land, reconfiguring Euston," he told *ITV News Central*.

Sunak's allies had hoped to wrongfoot Starmer by challenging him to commit to the full HS2 route. The Conservatives would then have asked how he would pay for the other transport projects promised by the prime minister.

Starmer's move might anger some Labour figures. Last week five Labour mayors urged Sunak not to scale back HS2, saying it would "leave swaths of the north with Victorian transport infrastructure unfit for purpose".

Earlier yesterday Sunak's announcement that the HS2 southern leg from Birmingham would run to Euston in central London was thrown into doubt after officials said they could not guarantee the station would be built without private money.

The prime minister said he would take a new approach to the Euston redevelopment, which was put on hold this year, and bring in private sector developers.

Sunak promised a Canary Wharf-style development at Euston that would include thousands of offices and homes. His new plan involves building fewer platforms to save money. "We will complete the line from Birmingham to Euston," Sunak told the Conservative conference in Manchester.

But a day later, the officials said the commitment to run the line relied on the government securing enough private sector investment, and that trains would otherwise stop at Old Oak Common, west London, six miles from the capital's centre.

The Department for Transport said: "As we have always planned, the new line will finish at Euston — that has not changed. It is simply wrong to talk down the scale and benefits of this regeneration . . . there is already support and interest from the private sector.

"Ministers have had discussions with key partners since the announcement and the transport secretary will be meeting with the Euston Partnership in the coming weeks."

George Parker, Philip Georgiadis, Gill Plimmer and Jennifer Williams

September data
Housebuilding fall hits construction activity

VALENTINA ROMEI
ECONOMICS CORRESPONDENT

Construction activity posted its biggest monthly slide since May 2020 as a steep drop in housebuilding led to a greater than expected fall in September, according to a trusted survey.

The S&P Global/Cips UK construction purchasing managers' index dropped to 45, down sharply from 50.8 in August and well below the 49.9 forecast by economists polled by Reuters. A reading below 50 indicates most businesses reported that activity had contracted.

The data provided additional evidence that higher interest rates are weighing on demand in the economy as intended by the Bank of England in its fight against high inflation.

It comes as a separate survey published by the BoE yesterday suggested the labour market continued to cool.

The BoE left its interest rate unchanged at 5.25 per cent in September after a series of rises. James Smith, economist at bank ING, said yesterday's data would "bolster the case for another 'on hold' decision in November".

Construction companies blamed the slowdown on "cutbacks to new residential development projects in the wake of sluggish demand and rising borrowing costs", said Tim Moore, economics director at S&P Global Market Intelligence, which compiles the survey.

Businesses in the residential sector performed worst, with a reading of 38.1, its steepest downturn since April 2009, apart from when the construction sector closed during the pandemic.

Commercial and civil engineering activity also contracted in September, reversing the solid growth seen throughout the spring and summer. Builders noted that worries about the economic outlook had damped client demand.

> 'The scrapping of HS2 will undoubtedly derail the pipeline of future activity for many contractors'

The gloomy data came the day after the government announced axing the HS2 rail project. Kelly Boorman, partner and national head of construction at RSM UK, said: "The scrapping of HS2 will undoubtedly derail the pipeline of future activity for many contractors and their supply chain.

"Coupled with the delay in mobilising new infrastructure projects not even announced by the government, this will put some businesses at risk and create further industry uncertainty."

The survey showed jobs growth in the sector slowed to its weakest since June, while the use of subcontractors fell for the first time since January.

Data yesterday from the BoE's September Decision Maker Panel, a monthly survey of chief financial officers, showed businesses expected inflation in the year ahead to be 4.9 per cent.

The figure was marginally up from the 4.8 per cent reported in August but well below the recent peak of 9.5 per cent reached in September last year. Companies predicted wages would rise 5.2 per cent, up from 5 per cent in August but down from 6.3 per cent in December 2022.

Tomasz Wieladek, economist at the investment company T Rowe Price, said the survey reflected the increase in petrol prices, which have risen 13 per cent since August. He said the moderate increase in inflation expectations suggested that the easing in underlying price pressures coming from weaker demand "more than offset a very large move in oil prices".

The BoE data showed businesses were finding it easier to recruit workers, with 55 per cent reporting it was a little or much harder to find new employees, down from 57 per cent in the previous month and well below the 84 per cent reported in the same month last year.

Archegos fallout
Banks rebuked over risk management flaws

LAURA NOONAN
FINANCIAL REGULATION EDITOR

The Bank of England has criticised banks for failing to heed its warnings and take action across their businesses to address the flaws in risk management systems exposed by the Archegos hedge fund scandal.

In a letter to leading lenders, the BoE said it had directed them to make improvements to their markets businesses in December 2021, months after investment firm Archegos failed owing to highly leveraged bets that went wrong.

The instruction followed a review by the central bank that found weaknesses in risk management processes had contributed to more than $10bn in collective losses resulting from the Archegos collapse.

It also came as regulators across the world warned about the heightened risks to markets as economies adjust to an era of raised interest rates.

"It is disappointing that the messages we communicated previously have not been fully addressed," the BoE wrote.

It also pointed to the UK gilts crisis last year as evidence that "there is still some way to go in applying these lessons to fixed-income businesses".

The BoE was forced to intervene with a £65bn bond-buying programme to halt plummeting UK gilt prices in September 2022, after the Liz Truss government's "mini" Budget triggered a sell-off by highly leveraged pension fund vehicles, known as liability driven investments.

The debacle led the central bank to expand a planned review of banks' fixed-income businesses to look at the broader issues exposed by the LDI crisis.

Announcing the review's findings, the BoE said it found a "number of shortcomings" in risk management of individual clients — known as counterparty risk — as well as failures around the "margining arrangements", which determine how much clients owe at any given time.

It stressed that it expected companies to "extend enhanced credit due diligence principles, client disclosure standards, and counterparty risk management controls beyond those that have been introduced for hedge fund clients in equity financing".

Bank of England: disappointed its messages not fully addressed

These should be expanded to "all client types in all secured financing and other relevant trading businesses".

On the subject of counterparty risk, the BoE said many banks had made "insufficient attempts" to work out how concentrated their risks were to clients and collateral.

It added that some lenders had failed to establish "formal controls" to limit exposures to clients or types of assets and called for action in response.

"With the recent shifts in the global macro environment, firms should enhance the way they assess their trading and counterparty risks, incorporating new and broader stresses into their risk management processes," it wrote.

On margining, the BoE criticised lenders for "inadequate" monitoring of certain types of risk, alongside their failure to have clear policies on, for example, the discounts they applied to collateral pledged with the bank.

The letter was sent by BoE head of international supervision Nathanaël Benjamin and head of UK deposit takers David Bailey.

Eastern Ukraine

Russia strike on Kharkiv village kills dozens

Deadliest attack this year hits grocery store and café close to funeral gathering

ROMAN OLEARCHYK — KYIV

At least 50 people, including children, were killed by a Russian air strike in the eastern Ukrainian region of Kharkiv yesterday, marking the deadliest single attack this year.

Russian missiles hit a grocery store and an adjacent café in the village of Hroza, where locals had gathered after a funeral, said Ukraine interior affairs minister Ihor Klymenko. Almost every family in the village of 330 people had at least one relative at the gathering, Klymenko added, hinting at a devastating blow for the community.

The village is close to the city of Kupiansk, which Ukrainian forces liberated last autumn as part of a surprise counteroffensive that pushed back Russian troops. The city is a strategic staging area for forces attempting to control the eastern Donbas region over which both sides continue to fight.

This year's counteroffensive, by contrast, has made only modest gains in liberating south-eastern regions, where Russia continues to occupy 18 per cent of state territory.

In a Telegram post that included a photograph of bodies lying on the ground, Ukraine president Volodymyr Zelenskyy described the attack as a "demonstrably brutal Russian crime" and a "completely deliberate act of terrorism".

Having hours earlier addressed a summit of European leaders in Spain, Zelenskyy went on to urge European leaders to strengthen Ukraine's air defences and provide more weaponry for his military, saying it is "about giving our country protection from terror".

Zelenskyy said he was confident he still had broad US backing despite "strange" voices in Congress and the exclusion of more aid for Kyiv from a US spending deal. US lawmakers jettisoned $6bn in Ukraine aid to avert a government shutdown at the weekend amid Republican infighting over the funding, a decision Zelenskyy linked to next year's US election.

> Attack was a 'brutal Russian crime' and a 'deliberate act of terrorism'
>
> Volodymyr Zelenskyy

Zelenskyy insisted he had US president Joe Biden's "100 per cent support" and "bipartisan support in Congress".

Spain has said it will give Ukraine six new Hawk missile launchers to bolster its defences after Prime Minister Pedro Sánchez met Zelenskyy in Granada. A Spanish official said the missile launchers would help Ukraine "cope with possible Russian bombardment of civilian targets and critical infrastructure".

Denise Brown, the UN's humanitarian co-ordinator for Ukraine, condemned Russia's actions in Kharkiv and said that "intentionally directing an attack against civilians or civilian objects is a war crime". Kyiv, its western allies and human rights activists have repeatedly accused Russia's invading forces of conducting indiscriminate shelling and air strikes of civilian buildings and public infrastructure, as well as other war crimes including rape, torture and the abduction of children.

The International Criminal Court has issued arrest warrants for Russian president Vladimir Putin and a top official in his government for war crimes related to the abduction of children. Ukraine is pursuing more than 100,000 war crimes charges against Russia.

Hundreds of thousands of combatants on both sides are estimated to have been killed or seriously wounded. Material destruction is significant, with 120,000 buildings including 365 schools destroyed in Russian aerial attacks.

Additional reporting by Barney Jopson in Granada

Invasion

Moscow eyes irregular measures to fund rising cost of war

MAX SEDDON AND ANASTASIA STOGNEI
RIGA

Russian president Vladimir Putin's cabinet is turning to increasingly irregular revenue-raising measures to fund defence spending, which has tripled since the full-scale invasion of Ukraine.

The Russian government has said it aims to spend Rbs10.8tn ($108bn) on defence next year, three times the amount allocated in 2021, the last year before the invasion, and 70 per cent more than was planned for this year.

To cobble together that sum, the cabinet is relying to a greater extent on irregular revenues stemming from one-off taxes and levies, including "voluntary donations" western businesses have to pay when leaving Russia.

The defence budget "will allow us to completely support the tasks of the special military operation", finance minister Anton Siluanov said, using the Kremlin's euphemism for the war in Ukraine. The military spending rise, he said, was "essential to achieve our main goal: making sure we win".

Russia's record Rbs36.6tn budget for next year will take defence spending to 6 per cent of gross domestic product, exceeding social welfare for the first time, and require the Kremlin to tap far more revenue sources than previously.

"Putin has two priorities: war and power," said Konstantin Sonin, an economist and professor at the University of Chicago. "That's why the budget process now works in such a way that policymakers first make sure the junta gets what it needs for the war and then address the rest of the budget . . . And to do all that, they constantly look for new sources to scrape money together."

As part of the funding plans for 2024, irregular budget revenues will leap to Rbs2.52tn, the highest level ever. By contrast, such revenues this year amounted to just Rbs745bn.

The bulk of next year's one-off revenues are Rbs800bn worth of social contributions that Russian companies were supposed to pay in 2022, but were postponed until 2024. Another Rbs2bn is expected to come from new export duties tied to exchange rates, the western companies' "voluntary donations" when leaving Russia, tax increases and subsidy cuts for energy producers, and a rise in utility tariffs.

Those measures come after Russia raised Rbs300bn this year from a windfall tax on "excessive profits" made by commodities companies, particularly the metals sector, more tax increases in the energy sector and Rbs114bn from western companies.

Among Russia's battle difficulties, its vessels in the Black Sea have been under sustained attack from Ukrainian missiles. That has prompted Moscow to sign a deal with Georgia's breakaway region of Abkhazia to establish a permanent naval base in the region.

Aslan Bzhania, Abkhazia's leader, who met Putin on Wednesday, told Russian newspaper Izvestiya yesterday there would be "a permanent base for the Russian navy fleet in the Ochamchira district". The Kremlin declined to confirm the claim. According to satellite images, several Russian vessels have recently been transferred away from occupied Crimea in Ukraine.

Central Europe. Conflict fallout

Slovak voters turn against Ukraine 'threat'

Growing resentment towards refugees led to anti-migrant party's election victory

RAPHAEL MINDER — CHOŇKOVCE

Clear message: a billboard in eastern Slovakia for the Hlas party led by Peter Pellegrini
Michaela Nagyidaiová/FT

The village of Choňkovce in eastern Slovakia is only 10km from the border with Ukraine, but proximity no longer translates into sympathy for those escaping the war-torn country.

Last weekend, almost half the 540 villagers voted for Smer, the party most vocally opposed to continued support for Kyiv. It is led by populist Robert Fico, who is slated to return as prime minister and who has also opposed sanctions against Russia. The rest of Choňkovce's votes went predominantly to two other anti-migration parties with which Fico is in talks to form a ruling coalition.

"In the past year the mood has changed here," said Ján Skyba, the former mayor of the village and a Smer party member. "We're still happy to help the poorer Ukrainians, but not the rich ones who are driving cars that you can't even find in Slovakia."

Smer capitalised on growing resentment towards Ukrainian refugees to clinch first place in Slovakia's parliamentary election on Saturday, a victory that was seen as a further sign of fraying western support for Kyiv. Fico has echoed Russian propaganda lines about the war, telling an election rally this autumn the conflict started in 2014 when "Ukrainian Nazis and fascists started murdering the Russian population of Donbas [in eastern Ukraine]".

On Tuesday, Fico defended his party's right to "voice our sovereign opinions" against Ukraine, even if that risked his nominally centre-left party being kicked out of the European centre-left group in the European parliament.

In communities near the Ukraine border, sentiment was not always as negative. People from Choňkovce sent eight trucks of humanitarian aid to Ukraine and housed refugees after Russia's all-out invasion last year, the former mayor said. But locals have since grown unhappy about Slovak authorities seemingly prioritising aid to Ukraine over their own struggling citizens.

"There is deep resentment among our citizens about the state's generosity towards Ukraine compared to the neglect shown by successive governments in Bratislava towards the inhabitants of Slovakia's poorer eastern areas," Skyba said.

The pushback against Ukrainians intensified even though most refugees only passed through Slovakia on their way to other EU countries or returned to relatively safe parts of Ukraine. Of the 1.7mn people who crossed the border from Ukraine since the war began, only 109,000 have registered in Slovakia, according to the UN agency for refugees.

Choňkovce's only remaining Ukrainian refugee is Irina Nedaskivska, who fled her native town of Irpin, which was heavily attacked by Russian forces in March last year when they tried to occupy Kyiv. "What I know is that when I came here everybody welcomed me as one of them," said Nedaskivska, who has found work as a helper at a cow farm in Choňkovce. "I'm not interested in politics, I work hard and I don't misuse the system here."

But war-related issues have added to the negative views about Ukraine among Slovakia's farming communities. Last spring, Slovakia joined a Polish-led coalition of EU member states that unilaterally banned grain imports from Ukraine, defying the EU's common trade policy. Bratislava settled its dispute with Kyiv last month, but farmers remain concerned.

As a farming powerhouse, "Ukraine is a threat", said Dušan Timko, a Slovak farm manager who believes Ukraine has an unfair advantage. "We're in the EU and getting controlled for pesticides and everything else, but nobody knows what gets regulated in Ukraine."

Ukrainians are not the only ones targeted by Fico and his potential allies, including his former protégé, Peter Pellegrini, who have stoked anti-immigrant fears. Late on Wednesday, the Slovak caretaker government announced restrictions on its border with Hungary to stop an influx of migrants, mainly from the Middle East, pre-empting action on one of Fico's election pledges.

> 'There is deep resentment among our citizens about the state's generosity towards Ukraine'

Austria, Poland and the Czech Republic have recently all imposed border checks with Slovakia, even though all four form part of the free-travel Schengen area. Locals fear these checks could result in more migrants settling in Slovakia rather than passing through on the way to more affluent EU nations.

Fico, 59, is now seeking his fourth mandate as prime minister. His last term ended abruptly in 2018 when he resigned after weeks of street protests over the killings of an investigative journalist, Ján Kuciak, and his fiancée. One of Kuciak's last investigations focused on alleged ties between Smer and Italian Mafia groups.

In the bigger eastern town of Sobrance, election day was busy for Gabriela, a waitress at the Mirage café where her boss offered free coffee to anyone who voted for Smer or other anti-immigration parties. Gabriela voted for Smer last weekend.

"People say Fico is corrupt, but I think everybody at the top of our politics is corrupt," she said. "Outsiders sound scared by what we voted, but they don't understand our situation here."

Additional reporting by Eva Kubániová in Choňkovce

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Economic outlook

IMF predicts greater chance of global 'soft landing'

COLBY SMITH — WASHINGTON
SAM FLEMING — LONDON

The head of the IMF has said the "remarkable resilience" of the global economy this year has cut the chances of a painful recession in the coming quarters, even as she warned of weak growth over the next five years.

Speaking in Ivory Coast ahead of the annual World Bank and IMF meetings in Morocco, Kristalina Georgieva highlighted "strong momentum" in the US economy, also singling out India as a bright spot. The odds of a "soft landing" for the global economy had risen as a result, she said.

However, the managing director warned the economic outlook remained highly fragmented, noting that the US was the only major economy where output had returned to its pre-pandemic path.

Policymakers could not afford to let their guard down, she added, as they battled inflation and leaned against financial stability risks.

"The world economy has shown remarkable resilience, and the first half of 2023 has brought some good news, largely because of stronger-than-expected demand for services and tangible progress in the fight against inflation," she said.

Her remarks contrast with the more downbeat tone the IMF struck at the spring meetings in April. Then, it warned of a "hard landing" for the global economy, if persistently sticky inflation kept interest rates higher for longer and financial stress worsened.

That view has evolved in the intervening months, with Pierre-Olivier Gourinchas, the fund's top economist, telling the Financial Times in July that the risks of a crash for the global economy were receding.

Undercutting Georgieva's optimism was grave concern about what she described as a "slow and uneven" recovery since the pandemic, which has led to a "deepening divergence in economic fortunes between and within different country groups".

Taken together, the IMF reckons total economic output lost globally since 2020 has reached $3.7tn. Economic activity in China was below expectations, she said, while many countries struggled with "anaemic growth".

Global growth was falling well short of the 3.8 per cent average seen in the two decades that preceded the pandemic, Georgieva said. Moreover, over the next five years the outlook had deteriorated further.

"Economic fragmentation threatens to further undermine growth prospects, especially for emerging and developing economies, including right here in Africa."

The managing director did not deviate from her long-held message that central banks must "avoid a premature easing of policy", given concerns that inflation has not yet been fully tamed and could well flare up again, even after substantial interest rate increases.

Kristalina Georgieva: highlighted 'strong momentum' in the US

"Fighting inflation is the number one priority," she said, adding that it was likely to remain above target in many countries at least until 2025.

The fund is due to publish its latest set of forecasts on the global economy's prospects next week as part of the Morocco meetings, as well as assessments of fiscal and financial stability risks.

The meetings come against the backdrop of bond market turbulence, as a sell-off pushes borrowing costs to their highest level in a decade or more. The IMF chief warned that tighter credit was already putting pressure on sectors including commercial real estate in the US and Europe.

Continued stress in the Chinese property sector was "a cause for concern", she added, as was heavy indebtedness in parts of the non-bank sector.

See Markets Insight

INTERNATIONAL

Rate rises bring pain to mortgage payers across Europe but some are coping better than others

Market traditions mean borrower preferences and lender offerings differ substantially even within the single currency area

FT REPORTERS

Financial hit: an increasing number of Europeans will suffer in the coming years as borrowing costs are likely to remain higher for longer than anticipated
FT montage/Dreamstime

Across Europe, borrowers looking to secure new mortgages or refinance existing ones have found their payments soaring on the back of sharp rises in central banks' interest rates.

With inflation set to fall back to rate-setters' 2 per cent targets slowly and borrowing costs likely to remain higher for longer than initially anticipated by lenders and borrowers, an increasing number of people will be hit financially in the coming years.

For those already on the housing ladder, much depends not only on variations in rate-setters' levels of aggressiveness but also on divergences within national mortgage markets.

"Historical traditions mean there are still radical differences between mortgage markets throughout Europe," said John Muellbauer, an economist at the University of Oxford. "Despite the launch of the single currency more than two decades ago and some integration in other areas of financial markets, that hasn't happened in housing."

United Kingdom

- **Average interest rate for existing mortgages:** 3.06%
- **House price inflation since 2015:** up 18 per cent
- **Borrowing limits:** Buyers largely limited to borrowing 4.5 times their income

UK homeowners are among the most exposed because of a combination of higher rates — the Bank of England's benchmark rate is 5.25 per cent compared with the European Central Bank's 4 per cent — and the proliferation of short-term fixed-rate deals.

More than 1.4mn British households will be affected by much higher mortgage costs this year alone, according to data from the Office for National Statistics, as they roll off fixed-rate deals that were set when policy rates were a fraction of today's levels.

Even so, without the changes in the mortgage market over the past two decades, the UK would have been much more vulnerable.

Since 2003, the proportion of mortgages on a variable rate, which moves directly in line with central bank rates, has dropped from 70 per cent to 13 per cent, with 61 per cent of loans now on five-year or longer fixed rates, compared with 11 per cent 20 years ago, according to Oxford Economics.

France

- **Average interest rate for existing mortgages:** 1.55%
- **House price inflation since 2015:** up 15 per cent
- **Borrowing limits:** Monthly payments can be no more than 35 per cent of the borrower's salary

Borrowers in countries such as France have so far had greater protection from higher rates, mostly because their mortgages tend to be fixed for decades at a time.

While fixes of more than five years are rare in the UK, the average length of a mortgage in France is 23 years, according to the Bank of France. Less than 5 per cent of French mortgages track policy rates.

Another reason French borrowers have not been as badly hit is because of the so-called usury rate, a maximum level of interest banks are able to charge, set by the Bank of France to protect consumers and guard against over-indebtedness.

It tracks inflation and has now started to rise, but not at the same pace as interest rates in Europe. That has caused short-term pain for lenders, until the rates they charge can catch up.

"French banks have not enjoyed the same boost to revenues and immediate benefit from higher rates as their European peers," S&P Global Ratings said in a report last month.

The flip side of these measures to protect consumers has been a drop-off in new home loans, as banks shy away from lossmaking deals. Bank of France data showed the amount of new loans granted dropped to €12bn in July — the lowest level since 2014.

Spain

- **Average interest rate for existing mortgages:** 3.44%
- **House price inflation since 2015:** up 23 per cent
- **Borrowing limits:** Monthly mortgage repayments tend not to exceed 30 per cent of a borrower's income

By contrast, variable rate products account for roughly 75 per cent of the 5.5mn outstanding mortgages in Spain. "The 4.1mn families who have variable mortgages are freaking out," said Ricard Garriga, chief executive of Trioteca, a Barcelona-based mortgage broker.

Rising central bank rates mean customers are desperate to switch products. Facilitating those changes is a 2019 mortgage law that made it easier for consumers to move to a different lender by ensuring that cancellation penalties and fees were not prohibitive.

Taking a typical €200,000 loan, Garriga said, the most common exit penalty was 0.5 per cent of its value — €1,000 — and that borrowers would also have to pay a new appraisal fee of €300-€400.

The nature of the products on offer is also changing. While 10-year-plus fixed mortgages surged in popularity when borrowing costs were low, Spain has shifted into a new era in the past year. The fastest-growing category is now "mixed" products. Familiar to UK homeowners, they offer a fixed rate for a few years before becoming variable.

Such products accounted for 37 per cent of all new mortgages in July, according to data from CaixaBank.

Germany

- **Average interest rate for existing mortgages:** 1.88%
- **House price inflation since 2015:** up 26 per cent
- **Borrowing limits:** Few limits on loan to income ratios

German borrowers have long preferred longer-maturity mortgages, with 10- to 20-year fixed rate products the most popular.

But unlike in countries such as the UK or France, where limits are placed on how much customers can borrow based on the value of their income, German borrowers have fewer constraints.

The lack of strict limits based on income helped to fuel strong rises in house prices during the boom years of low interest rates and massive bond purchases under the ECB's quantitative easing programme.

Over the past year, property prices in Germany have fallen 10 per cent, the sharpest drop in the entire EU.

Higher rates and lower prices could be making mortgages less risky as Germans are now paying larger deposits, even if it means asking parents for help. "Buying a property is now more often a real family project," said Frank Lösche, a construction financing specialist at Dr Klein, a German mortgage broker.

Jens Tolckmitt, chief executive of the Association of German Pfandbrief Banks (VDP), which collects data from 700 credit institutions, agrees that the rise in financing costs has made high loan-to-value loans rarer. He estimated debt as a share of German house purchases had fallen from 80 per cent in 2021 to 75 per cent this year.

There had also been a shift away from loans with a fixed-rate period of well above 10 years, said Tolckmitt.

These had fallen from half of new business to just below 40 per cent, despite a "long-lasting tradition" of long-term lending in the German mortgage market, he added.

Italy

- **Average interest rate for existing mortgages:** 3.04%
- **House price inflation since 2015:** up 9 per cent
- **Borrowing limits:** Monthly payments tend to be capped at about 35 per cent of the borrower's income

For Italians, the pre-euro era of high interest rates left a lasting impression. Many prefer to purchase homes in cash, removing the risk of rising borrowing costs altogether.

Before the pandemic, 51 per cent of first-time homebuyers and 81 per cent of buy-to-let investors did not take out a mortgage, according to real estate group Tecnocasa.

Italian homeowners with a mortgage have traditionally had to make relatively high repayments because of banks' stringent lending conditions.

According to Muellbauer at Oxford, this has meant that overall levels of Italian mortgage debt are "unbelievably low" relative to income levels.

The result is that, despite many of those with mortgages relying on variable rates, Italian homeowners are relatively well insulated overall.

But some of those with loans — many of which have variable rates — are struggling with higher mortgage costs.

In March, the most recent month for which data is available, mortgage instalments worth a total of €6.8bn were missed, according to Fabi, the national bankers' association, with those tied to variable rates proving "especially problematic".

> 'The 4.1mn families [in Spain] who have variable mortgages are freaking out'

Netherlands

- **Average interest rate for existing mortgages:** 2.49%
- **House price inflation since 2015:** up 47 per cent
- **Borrowing limits:** Owners cannot borrow more than the value of their home

In the Netherlands, variable rate and short-term mortgages have become much more popular as customers try to avoid locking into soaring rates that are likely to drop in the medium term.

Such products made up more than 21 per cent of new or refinanced deals in June, up from less than 11 per cent a year earlier.

Dutch homeowners must also contend with the frothiness of the property market. OECD figures show prices in the Netherlands have surged by almost 50 per cent since 2015 — when the ECB began its multitrillion-euro QE programme — and this year.

But they will have dropped 9 per cent from their July 2022 peak by the end of this year, according to analysts at Rabobank, raising the prospect of negative equity for more recent buyers in the Netherlands.

Jasper de Groot, chief executive of property website Pararius.com, said about one in 25 owners had outstanding loans that were worth more than the value of their homes. But the housing shortage in the Netherlands would limit further price falls, he added. "As long as interest rates stabilise, I do not expect further declines."

Reporting by Owen Walker and Akila Quinio in London, Sarah White in Paris, Barney Jopson in Madrid, Martin Arnold in Frankfurt, Silvia Sciorilli Borrelli in Milan and Andy Bounds in Brussels

Exports

WTO cuts trade forecast amid manufacturing slowdown

VALENTINA ROMEI — LONDON

The World Trade Organization has halved its estimate for exports growth around the world this year as manufacturing industries are hit by a slowdown and rising geopolitical tensions cause trade patterns to fragment.

The Geneva-based intergovernmental organisation said yesterday it expected the volume of world merchandise trade to grow by just 0.8 per cent, down from a 1.7 per cent increase it had forecast in April.

Ngozi Okonjo-Iweala, WTO director-general, said the projected slowdown was "cause for concern because of the adverse implications for the living standards of people around the world".

She added that global economic fragmentation "would only make these challenges worse", calling on WTO members to avoid protectionism.

The WTO reported that the share of intermediate goods in world trade, an indicator of global supply chain activity, fell to 48.5 per cent in the first half of 2023, down from an average of 51 per cent over the previous three years.

In a sign of increasing tensions between Washington and Beijing, the share of Asian bilateral partners in US trade in parts and accessories — a key subset of intermediate inputs — fell to 38 per cent in the first half of 2023, from 43 per cent in the same period of 2022.

Ralph Ossa, WTO chief economist, said that broad deglobalisation was "not here yet". However, he warned that while the data suggested goods continued to be produced through complex supply chains, "the extent of these chains may have plateaued, at least in the short run".

The WTO's downgrades come amid a slump in goods exports and imports that began at the end of last year. Last week, the Netherlands Bureau for Economic Policy Analysis, or CPB, reported that global trade volumes fell by an annual rate of 3.2 per cent in July, the steepest drop since the early months of the coronavirus pandemic in 2020.

The WTO attributed the trend to the impact of high inflation and borrowing costs on demand in many advanced economies, as well as a strained property market in China. It also noted the weakness in trade coincided with a "global manufacturing slowdown".

Together with the war in Ukraine, these developments "have cast a shadow over the outlook for trade in 2023 and 2024", said the WTO.

Mediterranean crossings

EU and Tunisia clash over financing of migration deal

LAURA DUBOIS — BRUSSELS
AMY KAZMIN — ROME
ELENI VARVITSIOTI — ATHENS

Brussels and Tunis have locked horns over the financing of a deal aimed at curbing irregular migration to Europe.

EU neighbourhood commissioner Oliver Varhelyi said Tunisia was "free to cancel" its financial request and "wire back the money" it had already received. The commissioner wrote on X, formerly known as Twitter, that an EU-Tunisia migration deal "should continue once [Tunis] returns to the spirit of our . . . strategic partnership based on mutual respect".

His remarks came after Tunisia president Kais Saied earlier this week accused the EU of not following through on its July agreement to pay Tunis more than €250mn in a bid to reduce a recent spike in Mediterranean Sea crossings from the north African country.

Saied said he rejected a tranche of financial aid announced last month, a claim dismissed by Brussels, which said it had already wired €60mn to Tunis.

"[Saied] is arm wrestling with the Europeans because he wants to get financial assistance without conditions," said Hamza Meddeb, fellow at Carnegie Middle East Center, a think-tank. "That's why 6,000 migrants arrived in Lampedusa in one day last month; it is not a coincidence."

Negotiations on an additional €900mn in EU budget support for Tunis have not been concluded, as Saied has refused to agree to the terms of an IMF reform package tied to that money.

Police speak to migrants last month at a reception centre on the Italian island of Lampedusa

The spat has added to tensions within the EU over the terms of the agreement. Unusually high numbers of arrivals from Tunisia to Italy have exposed the limitations of the deal championed by Italian prime minister Giorgia Meloni.

Humanitarian organisations and some member states have raised concerns about the lack of human rights guarantees in the scheme, as the Tunisian authorities have been accused of dumping migrants in the desert on the border with Libya.

Additional reporting by Heba Saleh in Cairo

Hijab laws

Iran teenage girl's coma stirs memories of Amini death

NAJMEH BOZORGMEHR — TEHRAN

Images of a teenage girl comatose in a Tehran hospital have raised fears among Iranians of a fresh case resembling that of Mahsa Amini, who died in 2022 after being arrested for allegedly breaching the country's strict hijab laws.

The latest case prompted a clash on social media between the foreign minister of Germany and Iran's foreign ministry, after activists said Armita Geravand, 16, had been attacked by "authorities" for an alleged violation of the rules governing women's headscarves in the country.

Geravand lost consciousness on Tehran's metro as she travelled to school on Sunday morning with friends. CCTV footage from the station showed her entering a metro train, apparently not wearing a headscarf, only to be pulled out unconscious by her friends a few seconds later. The metro's management and state media said she had suffered a drop in blood pressure.

The apparent echoes of Amini, whose death in September 2022 triggered anti-government protests after images of her in a coma went viral online, have prompted fears of a similar incident.

"The problem is you think it is plausible that she was pushed back or hit as she tried to enter the metro station without a hijab," said Reza, a 22-year-old university student. "[I] don't want to imagine that we have another Mahsa Amini."

Hundreds of people were killed during months of protests against Iran's Islamic regime following Amini's death. Tehran blamed "outside forces" for what they said was a false account of her injuries.

The Tehran metro's managing director, Masoud Dorosti, told state news agency IRNA that Geravand had fainted as a result of a drop in blood pressure, hitting her head. No images have emerged from within the train carriage where Geravand lost consciousness.

In a video posted on IRNA, Geravand's mother, sitting beside her husband, said the family had been "told that her blood pressure dropped".

At the same time, Hengaw, a human rights group based outside Iran, claimed that Geravand was "physically attacked by authorities" in Shohada metro station "for what they perceived as non-compliance with the compulsory hijab, as a result of which she sustained severe injuries".

UN initiative

US fails to pledge money for climate fund

Divided Congress and battles to avoid shutdown hamper financing effort

AIME WILLIAMS — WASHINGTON
ATTRACTA MOONEY — LONDON

The US has failed to pledge money to the world's biggest multilateral climate fund at its second fundraising conference, highlighting wealthy governments' struggle to support poorer nations suffering from the impact of global warming.

The UN's Green Climate Fund, the largest fund dedicated to tackling climate change in developing countries, pulled in a total of $9.3bn from 25 countries by the close of its one-day pledging conference held in Bonn, Germany, yesterday.

But a divided Congress and fraught battles to avoid a government shutdown have stymied US efforts to secure money for the fund, illustrating the challenges for countries facing an economic slowdown as they begin negotiations for a new climate deal at next month's COP28 summit.

Sultan al-Jaber, president-designate of the UN climate summit and chief executive of Abu Dhabi National Oil Company, hit out at rich countries for failing to support the fund.

The GCF's "current level of replenishment" was "neither ambitious nor adequate to meet the challenge the world faces", he said yesterday. The fund was initially capitalised with $10.3bn by 45 countries in 2014, followed by a further $10bn from 32 countries for its first

> Current funding level is 'neither ambitious nor adequate to meet the challenge the world faces'

replenishment in 2019. For its second replenishment, it attracted significant fresh commitments from Germany, which pledged $2.2bn, the UK with $2bn, France with $1.7bn and Japan with $1.2bn.

Although the US promised $3bn to the fund in 2014, it committed no further funding in 2019 under former president Donald Trump, who withdrew the US from the 2015 Paris climate accord. President Joe Biden secured $1bn for the GCF in December last year, although the amount went towards fulfilling the US's earlier 2014 pledge.

Although Biden promised the US would spend $11.4bn annually by 2024 to help developing countries tackle climate change and transition to clean energy, congressional Republicans have thwarted the president's efforts to secure the money.

A spokesperson for the National Security Council said the US was "steadfastly committed" to "Biden's pledge to increase US climate finance to help developing countries tackle the urgent threat of climate change, but unfortunately is not in a position to make a pledge to [the GCF's second replenishment] at the October 5 conference".

The spokesperson added: "We look forward to sharing our approach to [the GCF's second replenishment] at a later date".

The fund allows pledges to be made after the completion of its conference.

Emerging and developing economies are responsible for about two-thirds of current greenhouse gas emissions, but many are struggling to access the finance needed for the green transition.

The fund disbursed $2.3bn by the end of 2021, according to its latest annual report.

Extreme weather

Hottest ever September stokes global warming fears

ATTRACTA MOONEY, STEVEN BERNARD AND CHRIS CAMPBELL — LONDON
AIME WILLIAMS — WASHINGTON

The world experienced its hottest September ever last month after surpassing the previous record by an "extraordinary" 0.5C, the European earth observation agency said, highlighting the challenge of limiting rises in temperatures caused by climate change.

Scientists at the Copernicus Climate Change Service said 2023 was on course to be the hottest on record, after the average global temperature in September was 1.75C warmer than the pre-industrial period of 1850-1900, before human-induced climate change began to take effect.

The monitoring service also found Antarctic sea ice levels remained at record lows for the time of year.

Last month's global average temperature of 16.38C was 0.5C above the previous warmest September in 2020, it said, and 0.93C above the 1991-2020 average for the month.

The September report follows a record-breaking summer when heatwaves, wildfires and flooding hit many

> 'The unprecedented temperatures have broken records by an extraordinary amount'

regions in North America, Europe and Asia.

Scientists have warned that such weather extremes will become more frequent and intense as global warming continues, with UN chief António Guterres warning of the advent of a dangerous era of "global boiling".

Samantha Burgess, deputy director of Copernicus, said: "The unprecedented temperatures for the time of year observed in September, following a record summer, have broken records by an extraordinary amount."

She added that the "extreme month" had probably pushed 2023 into the "dubious honour of first place" as the hottest year ever, with temperatures about 1.4C above pre-industrial average temperatures.

The El Niño weather phenomenon, which involves the warming of the Pacific Ocean, is also expected to drive global temperatures higher over the remainder of this year, scientists said.

Burgess added that with two months to go until countries met in Dubai at the UN COP28 climate summit, "the sense of urgency for ambitious climate action has never been more critical".

Countries remain divided over what actions to take to limit global warming to 1.5C above pre-industrial levels, in line with the overarching goal of the 2015 Paris Agreement.

While some countries, such as the US and EU, are pushing for an ambitious timeline to phase out fossil fuel projects without captured emissions, Russia has warned it would oppose such a deal.

In July, China frustrated diplomats at G20 climate negotiations by refusing to debate greenhouse gas emission targets.

Earlier this year, the UN's Intergovernmental Panel on Climate Change reported the risks of warming were greater than was thought and the world could reach the 1.5C threshold in the "near term".

Arts

Norwegian Fosse wins literature Nobel Prize

FREDERICK STUDEMANN — LONDON

Jon Fosse, the Norwegian writer celebrated for his spare, cryptic and haunting stories, has won this year's Nobel Prize for Literature.

The 64-year-old was given the 2023 award for his "his innovative plays and prose, which give voice to the unsayable", said the Nobel committee yesterday.

Anders Olsson, chair of the Nobel literature committee, said Fosse's "huge oeuvre" spanning some 40 plays, a wealth of novels, essays and children's books was rooted in the "language and literature of his Norwegian background with artistic techniques in the wake of modernism".

His writing, which is in the "new Norwegian" version of the language used by 10 per cent of the population, "exposes human anxiety and ambivalence at its core", Olsson added.

Fosse, tipped as a contender for the Nobel for more than a decade, learnt of the award while driving through the countryside north of Bergen. He told Reuters he was "overwhelmed and somewhat frightened. I see this as an award to the literature that first and foremost aims to be literature, without other considerations."

Critics regard his magnum opus as his multi-part work *Septology*, the last instalment of which was shortlisted for the International Booker Prize and described by the Financial Times' reviewer as a "Nordic triptych on art, alcoholism and the Almighty".

Next month, *A Shining* will be published, a story that his British publisher, Fitzcarraldo, described as "strange, haunting and dreamlike", following "a man who starts driving without knowing where he is going" who then gets lost: "As he grows cold and tired, he encounters a glowing being amid the obscurity."

Fosse is also well-known for his prolific writings for stage, which saw him hailed as "a new Ibsen" in his homeland and have been performed across Europe.

Fosse is the fourth Norwegian writer to win the prestigious award that comes with a prize of SKr11mn ($1mn). Last year's winner was French author Annie Ernaux.

Sport. Football tournament

Momentum builds for Saudi World Cup

Crown Prince Mohammed bin Salman, second left, with Fifa head Gianni Infantino, third left, and President Vladimir Putin, right, in Russia in 2018 — Getty Images

Riyadh could emerge as sole bidder for 2034 competition as deadline for candidates nears

JOSH NOBLE — LONDON

Saudi Arabia's bid to host the 2034 football World Cup is gathering momentum after countries in Asia and other regions lined up in support and a compressed selection process left scant time for a rival proposal.

Fifa, football's governing body, announced on Wednesday that the 2030 men's tournament would be hosted jointly by Spain, Portugal and Morocco, but that three games would also be held in South America to mark the centenary of the first World Cup, which was held in Uruguay.

The unprecedented move to spread the tournament across three continents narrowed the field to countries in Asia and Oceania for the tournament to follow. North America will host the next World Cup in 2026.

Within hours of Fifa's surprise announcement, Saudi Arabia confirmed its intention to bid for the 2034 competition.

"We believe the time is right for Saudi Arabia to host the Fifa World Cup," said Yasser al-Misehal, president of the Saudi Arabian Football Federation. "Our bid is driven by a love for the game and a desire to see it grow in every corner of the world."

The prospect of a Saudi-hosted World Cup and Fifa's plan to spread the 2030 tournament across the Atlantic have already drawn sharp criticism from fans' groups, environmental campaigners and human rights activists.

"Fifa continues its cycle of destruction against the greatest tournament on Earth," said Football Supporters Europe, an umbrella group representing fans across the continent. "Horrendous for supporters, disregards the environment and rolls the red carpet out to a host for 2034 with an appalling human rights record. It's the end of the World Cup as we know it."

The confirmation of Riyadh's intentions follows a campaign to build relationships across football, part of a broader push into global sport. It has splashed out hundreds of millions of dollars to bring elite players to its domestic league.

"Saudi Arabia has played a blinder. It has shown respect for relationships within global football, but it has cleared the path for the country, possibly, being the sole bidder for 2034," said Simon Chadwick, professor of sport and geopolitical economy at Skema Business School in Lille, France.

The Saudi proposal quickly received messages of support, including from the football federations of Gulf neighbours Qatar and the United Arab Emirates, as well as from Shaikh Salman bin Ibrahim al-Khalifa, the Bahraini head of the Asian Football Confederation.

The Saudi bid may advance unopposed. The only other country to have expressed interest in hosting the tournament so far is Australia, a fellow member of the AFC.

However, Fifa has now set a deadline for expressions of interest for the end of this month, giving bidders just over three weeks to make a decision.

Australia, which is already due to host the summer Olympics in 2032, might also need to find a co-host to meet the infrastructure requirements. The expansion of the tournament format to 48 teams requires hosts to have at least 14 stadiums. Qatar hosted the 2022 World Cup with just eight.

Following Fifa's announcement, Football Australia said it was still "exploring the possibility of bidding" for either the 2034 World Cup or the 2029 Club World Cup. The country co-hosted the Women's World Cup with New Zealand earlier this year.

"We will get a Saudi tournament in 2034," said Chadwick. "Who is going to argue [against it]?"

Republicans Party rancour makes achieving simple majority a tall order for Speaker candidates

LAUREN FEDOR — WASHINGTON

The clock is ticking for Republicans on Capitol Hill to elect a new leader, after the ousting of Kevin McCarthy this week left the House of Representatives without a Speaker and brought the dysfunction in Washington to a new level.

The historic vote laid bare long-simmering tensions within the Republican party and raised questions about who will lead the party at a time of deep division over issues such as how to fund the federal government and whether to underwrite more US aid to Ukraine.

It also underscored the nearly impossible task of governing, given Republicans control the House by a razor-thin margin. Any new Speaker will need a simple majority of the 435-member House, or at least 218 votes, to be elected. That will be a tall order, given the unprecedented rancour among congressional Republicans.

Further, any replacement will need to win over at least a handful of the eight Republican rebels who voted against McCarthy, as Democrats will almost certainly refuse to back a Republican.

Patrick McHenry, the interim leader, or Speaker pro tempore, of the House called the chamber into recess late on Tuesday after McCarthy's ousting, and members have been advised that no votes are expected until at least next week.

Two candidates — Jim Jordan of Ohio and Steve Scalise of Louisiana — have declared they are running, while others consider jumping into the race, including Kevin Hern of Oklahoma.

Some hardline Republican House members, notably Marjorie Taylor Greene of Georgia, have made the far-fetched suggestion that Donald Trump, the former president, throw his hat in the ring. The US constitution does not specify that the Speaker must be an elected member of Congress, although every Speaker has been one.

Speaking to reporters at a New York courthouse on Wednesday, where he is facing a civil fraud trial, Trump deflected questions about whether he would run, although he did not rule it out. "A lot of people have been calling me about Speaker. All I can say is: we will do whatever is best for the country and for the Republican party," said Trump.

"If I can help them during the process, I would do it. But we have some great people in the Republican party that could do a great job as Speaker."

Jim Jordan

The fast-talking Republican congressman from Ohio, 59, chairs the House judiciary committee and has pushed for the impeachment inquiry into President Joe Biden over his son Hunter Biden's business dealings. A former college wrestling coach, Jordan has long been a vocal ally of Trump. As a founding member of the House Freedom Caucus, Jordan is popular with the party's right wing.

Steve Scalise

The nine-term Republican congressman from Louisiana has risen steadily through party leadership during his time in Congress. The House majority leader, 57, is now pitching himself as the natural successor to McCarthy. Scalise became a household name in 2017 after he was shot and seriously injured by a leftwing activist at a congressional baseball game. He made a full recovery but is now battling blood cancer.

Kevin Hern

The Republican congressman from Oklahoma owned more than a dozen McDonald's franchises and started several other small and medium-sized businesses before being elected to Congress in 2018. Hern, 61, chairs the Republican Study Committee, a conservative faction of House members who have long pushed for budget cuts. While Hern has not officially said he is running for Speaker, he told reporters on Wednesday he was considering it.

Patrick McHenry

The 47-year-old Republican congressman from North Carolina was among McCarthy's closest allies during his time as Speaker. McCarthy designated McHenry, who chairs the House financial services committee, as Speaker pro tempore, meaning he will oversee the election of a new Speaker. McHenry has not said he wants the top job on a permanent basis, but several members have suggested they would support him if he entered the race.

Tom Emmer

Matt Gaetz, the Florida congressman who led the rebellion against McCarthy, touted Emmer, 62-year-old Republican congressman from Minnesota, as a successor even before the Speaker was ousted. But Emmer, the House majority whip who spent four years as chair of the National Republican Congressional Committee, the House Republicans' campaign arm, has indicated he will not run and will instead try to be House majority leader.

Donald Trump

The former president, 77, is already running for another four years in the White House and contending with a mountain of legal challenges. But that has not stopped several rightwing House members from suggesting he should also run for Speaker, a long-shot idea that would push the boundaries of congressional norms.

See The FT View

Fears of froth Retail investor-led buying spree of India's mid and small-caps triggers jitters over rally's longevity ➔ MARKETS, PAGE 11

Alstom shares plunge after delivery delays hit cash flow

- Big increase in train inventory blamed
- Alarm over hold-ups at British project

ADRIENNE KLASA — PARIS
PHILIP GEORGIADIS AND
JONATHAN WHEATLEY — LONDON

Alstom shares fell more than a third yesterday after the French maker of high-speed trains slashed its forecast for free cash flow, partly because of delays by UK customers taking deliveries.

The group warned that it expected negative free cash flow of €500mn to €750mn this year, a reversal from its earlier prediction that it would be "significantly positive".

Alstom, which makes transport equipment and manages project contracts, said a third of the squeeze on its cash flow stemmed from delays in completing the Aventra programme in the UK, a project to build 443 electric trains it inherited when it bought Canada's Bombardier Transportation in 2020.

> 'At the moment the UK environment for rail is very shaky'
> Alstom official

The rapid deterioration in Alstom's projected cash flow alarmed investors, sending its shares down 37.6 per cent.

Alstom pinned most of the blame on a big increase in inventory after ramping up production to avoid supply chain disruptions. It also suffered from project delays, particularly in the US and Europe, that pushed back payments.

The hit to cash flow was "a major blow to management's credibility", said Gael de-Bray, an analyst at Deutsche Bank. Alstom's investment-grade rating "now looks at risk, with a capital increase becoming increasingly likely".

Alstom insisted that it would not need a capital injection and said that the cash flow issues would begin to resolve themselves next year. The company, which had sales of €16.5bn last year and employs more than 80,000 people, is known for making France's fast-speed TGV trains. It is also involved in major UK rail infrastructure upgrades including London's Elizabeth Line and HS2.

In the UK, more than 80 trains built at Alstom's factory in Derby are sitting idle and have not yet been paid for by train operators, according to the company.

The Aventra project has been beset with problems, but Alstom said the latest hold-ups stemmed from delays in driver training and investments in maintenance facilities on the UK side amid "uncertainty" in the rail industry.

"At the moment the UK environment for rail is very shaky," an official at Alstom told the Financial Times.

The UK government yesterday also opened the door to cancelling part of a separate £2bn order from a joint venture between Alstom and Hitachi to supply trains to HS2 after announcing plans to radically scale back the project.

Alstom has not been notified of any potential changes to the order, and the government would face a compensation bill, according to an Alstom official.

Alstom's purchase of Bombardier's train unit has proved troublesome. An initial price of almost €7.5bn was cut to €5.5bn, partly because of a Bombardier profit warning before the deal closed. Alstom had sought the purchase as a means of bulking up in the face of Chinese competition and demand in Europe. A year earlier, EU regulators blocked a €15bn merger with Germany's Siemens, angering Paris and Berlin officials who had backed the deal.

Analysts at Deutsche Bank said that the group was now likely to finish the year with net debt of €3bn, about €1bn higher than previously expected.

Additional reporting by Sarah White

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Power play Disney raises game against India's JioCinema with Cricket World Cup giveaway

England's Mark Wood in action against New Zealand in the opening game of the tournament — Andrew Boyers/Reuters

BENJAMIN PARKIN — NEW DELHI

Disney is offering free mobile-phone streaming of the Cricket World Cup in India as the US entertainment group competes for supremacy with Indian billionaire Mukesh Ambani's JioCinema.

The World Cup started yesterday with England meeting New Zealand in Ahmedabad and runs until November 19. It will be the first time the competition has been held in India in over a decade and is expected to attract hundreds of millions of viewers.

Disney, which exclusively holds both the World Cup broadcast and digital rights, hopes that the contest will give it some momentum after last year losing the 2023-27 online rights to stream the Indian Premier League cricket tournament to JioCinema.

Mobile phones are a key viewing platform in India, where most people do not own televisions. JioCinema, a joint venture with investors including Ambani's Reliance Industries and James Murdoch, streamed the IPL earlier this year for free, poaching viewers and advertisers from Disney and sparking a price battle.

While Disney retained the TV rights for the IPL, it has been losing streaming subscribers. Chief executive Bob Iger said in July that the group was open to selling TV assets, and multiple reports have indicated that this could include offloading its India unit. Disney declined to comment.

Disney's World Cup decision highlights the challenges of attracting a mass audience in a country where purchasing power is far lower than in western markets. The group had in previous seasons experimented with making the IPL and other cricket tournaments free online.

However, this year's World Cup contest coincides with India's festive season, a two-month period of back-to-back religious festivals including Diwali, which usually helps drive a surge in consumer spending.

"There's no other country which is as financially sound as India in terms of supporting cricket," said Ayaz Memon, an Indian cricket writer.

Between its free mobile streaming and TV broadcasts, Disney is hoping to reach a similar number of viewers to the roughly 800mn people who watched the most recent IPL, said a person familiar with the matter.

India, which last won a World Cup in 2011, is the favourite in the tournament. An early exit could be a blow to Disney and the advertisers, bringing a sharp drop in domestic interest.

That is different from the IPL. "Irrespective of which team gets knocked out, the viewership tends to hold up," said the person.

"If, God forbid, India were to get knocked out in the early stages, that would be a big dent."

VinFast loses more than $1.4bn despite rise in output

MERCEDES RUEHL — SINGAPORE
PETER CAMPBELL — LONDON

VinFast, the newly listed Vietnamese carmaker that was briefly worth more than Volkswagen and General Motors, has lost more than $1.4bn this year, despite increasing shipments of electric vehicles.

In its first trading quarter since its stock market listing in August, the start-up said that it lost $623mn in the three months to September, even though it shipped 10,027 cars.

VinFast aims to sell up to 50,000 cars this year, despite shipping only 21,000 in the first nine months. It did not disclose how many were shipped internationally nor how many were sold in its home market. It said that it had "started to see" sales increases in North America.

Revenues in the three months to September were $342.7mn, more than double the same figure a year earlier but only 3 per cent higher than the previous three months.

VinFast's ambitions to become Vietnam's answer to Tesla have hit setbacks amid dire reviews for its first US model and the need for additional funding.

Owner Pham Nhat Vuong, Vietnam's richest man, this year pledged to provide $2.5bn to the company through grants and loans to help increase production. VinFast said yesterday that it expected to receive $1.2bn from its owner and major shareholders in the next six months.

The company previously disclosed that it relied heavily on vehicle sales to Green and Smart Mobility (GSM), a Vietnamese taxi company controlled by the carmaker's parent, Vingroup.

VinFast said yesterday that it was still pushing ahead with its global expansion with factories in India and Indonesia.

The company, which made its first car in 2019 before pivoting to electric vehicles in 2021, became an instant sensation when it listed in the US in August through a merger with a special purpose acquisition company.

More than 99 per cent of the company is controlled by its billionaire founder.

The small amount of shares publicly traded subject the company's share price to wild swings. At one point it had a valuation north of $200bn, more than most established automotive groups.

But the shares have since fallen, and this week they dropped below $10 — a nearly 90 per cent decline from a high of $82 in late August.

DoJ antitrust trial against search giant Google still faces a high bar

INSIDE BUSINESS
TECHNOLOGY
Richard Waters

Every antitrust trial needs a supply of incriminating internal emails or direct witness testimony to bring the claims of illicit business behaviour to life. Without those headline-grabbing details, regulators usually find themselves falling back on abstract economic theories to prove their case.

So it must have been a relief for US Department of Justice lawyers when the judge overseeing their landmark complaint against Google rebuffed the search company's attempt to suppress one particular piece of evidence.

In the internal note, a Google executive called search advertising "one of the world's greatest business models ever created", before adding that only "illicit businesses (cigarettes or drugs) . . . could rival these economics".

For a trial that is meant to lay the ground for a wave of antitrust actions against Big Tech, there have been few dramatic moments like this to punctuate the proceedings. One reason, the justice department says, is that Google deliberately took steps to make sure potentially damaging communications were deleted or kept confidential, while also teaching executives to avoid using terms like "dominant" and "market share" when discussing their business.

Judge Amit Mehta, who is overseeing the case in a Washington DC courtroom, also agreed to let some potentially damaging testimony be heard behind closed doors.

That has left the focus of the trial on business agreements that Google struck with Apple, mobile-phone companies and others to make sure its search service appeared as the default when users turned on their devices. The US government argues that these deals blocked upstart competitors that might have threatened its dominance in search.

During the trial's first four weeks, the prosecution has been able to produce little evidence of overt bullying by Google to enforce its allegedly exclusionary plan. When Apple considered giving users of its Safari browser a choice of search defaults, an email from Google warned: "No default — no revenue share." Sridhar Ramaswamy, an ex-top Google executive, claimed to see Google's influence at work when a telecoms company shied away from backing his rival search engine.

> The DoJ has not yet proved that Google using its huge wealth to cement its dominance counts as anti-competitive behaviour

This is a far cry from the far more overt strong-arming that Microsoft used to force PC makers to carry its internet browser in the 1990s — the basis of the antitrust case it faced a quarter of a century ago.

When it comes to the distribution deals that Google struck, the DoJ has at least had some compelling financial details to back its case. On the face of it, Google's willingness to pay more than $10bn to buy pole position provides strong economic incentives to suppress rivals.

To get Apple to carry its Bing search engine, Microsoft at one point offered to pay the iPhone maker more than the entire advertising revenue that the deal would produce. Apple executive Eddy Cue claimed in court that it was the superiority of Google's service that had won the day, but one Microsoft witness claimed to have been told that Apple thought Bing was better.

Yet the DoJ has at times struggled to demonstrate obvious harm. The most prominent "victim" of Google's behaviour to have appeared as a prosecution witness was Microsoft CEO Satya Nadella, the head of one of the richest companies on the planet. Google's lawyers argued that it was Microsoft's own failure to make inroads into the smartphone business with its Windows operating system that robbed it of a mobile platform for its own search engine.

Despite these issues, Google has been put squarely on the defensive in trying to argue in court against the significance of deals that it has been willing to pay billions of dollars for.

It has denied, for instance, that the vast amount of user data it gets as a result of the defaults has given it an insurmountable advantage.

According to the search company, there are diminishing returns from getting ever-larger amounts of data about what users are clicking on. But emails showed that some of its executives disagreed with that view.

Another Google claim has been that it is simple for users to change the default settings on their devices. But in reality, according to one government witness, hardly any users ever make this switch.

As the DoJ moves closer to wrapping up its case, it has succeeded in showing how Google used its huge wealth to cement its dominance in search. But it is not yet obvious that it has cleared the bar in proving this counts as anti-competitive behaviour.

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Contracts & Tenders

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COMPANIES & MARKETS

Banks

JPMorgan steps up securitisation effort

Proposed new US capital requirements concentrate minds at sector bellwether

JOSHUA FRANKLIN — NEW YORK

JPMorgan Chase has stepped up the pace at which it is securitising billions of dollars of its loan portfolio in anticipation of proposed new US capital requirements for large banks, according to people familiar with the matter.

The effort concerned JPMorgan's loan portfolio around products at Chase, its retail business, including mortgages, car lending and credit card loans, the people said. The bank planned to securitise and sell on a higher portion of the loans than it typically had done, they said. That would take loans off its balance sheet so that it would not have to hold regulatory capital against them, but JPMorgan would continue to service the loans to maintain its client ties.

JPMorgan, an industry bellwether as the largest US bank by assets, had $1.3tn in loans at the end of June. Securitisation is one tool it is using to reduce its risk-weighted assets, one of the people familiar with the matter said.

JPMorgan's plans to securitise more of its loans come amid more muted activity in the broader securitisation market. US asset-backed and mortgage-backed securitisation issuance has totalled $463bn in 2023, the lowest for this point in a year since 2016, according to Dealogic data.

JPMorgan is the industry's biggest book runner, working on $62.5bn worth of deals. Many of those deals will involve loans that it did not originate.

JPMorgan declined to comment.

The Federal Reserve in July came out with a proposal that would increase the amount of capital banks have to hold relative to their risk-weighted assets, a ratio that has already risen considerably since the 2008 financial crisis. Capital is used by banks to absorb losses.

Under the Fed's proposals, lenders would be required to hold an extra $2 of capital for every $100 of risk-weighted assets. JPMorgan chief executive Jamie Dimon has criticised regulators over the proposals, warning that they risked making bank stocks uninvestable.

The bank's securitisation plans show that it is taking steps to prepare for some version of the new rules to come into effect, even as they have yet to be finalised. The Fed is soliciting comments on the updated capital requirements in a notice of proposed rulemaking.

"From what we can tell, every large bank is going through some form of 'RWA optimisation' or 'RWA diet', which in simple terms, reflects balance sheet deleveraging," Wells Fargo banking analyst Mike Mayo wrote in a research note last week.

Wall Street bankers have warned that the capital rules will disincentivise them from making loans and push more banking activity outside the regulated banking industry and into the more lightly regulated shadow bank sector. This migration has been under way for more than a decade with the expansion of hedge funds and private credit firms.

Banks caution that this movement of lending activity risks driving up borrowing costs, since banks benefit from cheaper deposit funding than those funds and firms. Regulators have argued that higher capital standards are needed to make banks safer and guard against failures such as that of Silicon Valley Bank earlier this year.

Retail

Casino secures cash injection in creditor rescue deal led by Křetínský

ADRIENNE KLASA — PARIS

Casino has finalised an agreement for a capital injection led by Czech billionaire Daniel Křetínský and a debt restructuring as the heavily indebted French food retailer rushes to avert default.

The binding agreement builds on the terms of a deal struck in July with Křetínský and his partners — investment firm Fimalac and top creditor Attestor — as well as its secured creditors, locking in an injection of €1.2bn in new money and a €6.1bn reduction of the company's debt.

In a deal that heralds the end of a saga that has gripped the Paris business world for years, current shareholders will be heavily diluted and control of the company will pass from Jean-Charles Naouri, who built Casino using high levels of debt and ran it for decades, to the group led by Křetínský.

All unsecured debt will be converted into equity, in exchange for a proposed 1.7 per cent of Casino's share capital, as well as €1.35bn in secured debt.

Naouri said: "Casino has reached a major milestone in its financial restructuring process by obtaining the agreement of its main creditors on a financial restructuring plan that creates a favourable framework for the sustainability of the group's activities, the continuation of jobs and head offices, and the continued development of all its brands."

The company said it now had until October 25 to obtain the sign-off from a commercial court to enter an accelerated safeguard procedure, under which it could finalise the plan and force creditors who had not yet agreed to it to comply.

Křetínský's consortium is expected to take the reins by March 2024.

Casino said it would continue to try to broker a deal with creditors who were not party to the agreement.

Philippe Palazzi, a former executive at Germany's Metro, in which Křetínský is also an investor, will be proposed by the Czech businessman and his allies as Casino's president and chief executive.

France's sixth-largest food retailer, Casino was built up by Naouri over decades but was saddled with billions in debt that credit rating agencies doubted the company could repay.

The business has suffered from lack of investment, with its hypermarket and supermarket formats doing especially badly.

Customer footfall had begun to improve in supermarkets in the past few weeks lured by price cuts, the company said, but hypermarkets continued to lose customers and sales volumes.

Casino has been trying to secure a restructuring deal since May, when it entered a court-supervised negotiation with its creditors, as its financial situation deteriorated. The retailer entered an agreement with the government to defer tax and social security payments during the negotiating period. The full payment of about €300mn will come due once the transition is complete.

Casino's shares have plunged more than 88 per cent this year. Trading was suspended on Wednesday but resumed yesterday, with the stock closing up 0.3 per cent.

Mining

Teck says coal unit sale is on course despite political strains

TOM WILSON AND EUAN HEALY

Canada's Teck Resources said the sale of its steelmaking coal arm was proceeding as planned despite doubts over the reported bid of Indian group JSW Steel after plunging relations between Ottawa and New Delhi.

JSW Steel has expressed interest in acquiring a stake in the $8bn coal unit, according to Reuters.

But ties between India and Canada have cratered after Canadian premier Justin Trudeau said there were "credible allegations" that Indian government "agents" were behind the murder of Sikh separatist Hardeep Singh Nijjar in Vancouver, British Columbia, in June.

"The news about the geopolitical events between Canada and India is not something that's causing us to slow down our process," Teck chief executive Jonathan Price told the Financial Times Mining Summit yesterday. "We're fully confident that we continue to proceed and we continue to have options in front of us that will give us a good outcome."

But India has stopped issuing visas to Canadians and told Ottawa to reduce its diplomatic presence in the country.

Teck has not disclosed the names of bidders for its coal unit but JSW has been reported as one of the potential buyers. Canada is among the biggest suppliers of coal to India's steel industry.

Teck's sale of all or part of its coal unit, which includes four metallurgical coal mines in British Columbia, is set to be one of the biggest mining deals in years.

Glencore in June offered to buy the coal business for an undisclosed cash sum, after its earlier hostile bid for the entirety of Teck, which also includes a metals division, was rejected.

Teck said then that it would engage with Glencore but noted it was just "one of a number" of proposals under consideration.

Price said he would like to put a deal to shareholders before the end of the year. "When we get to the point of having a competitive process and solid proposals, which is where we are now, I think it's incumbent on us to move forward and to take a decision," he said.

HyperSpace's AYA park in Wafi City mall, Dubai. The Saudi Arabian company aims to give shopping centres a 'cool factor' to attract customers

Fun and games

Riyadh fund bets on digital theme parks

Saudi Arabia is investing in a three-year-old start-up that designs digital theme parks in shopping centres, in its latest move to break into the technology and leisure industries.

Riyadh Season, a government-backed entertainment initiative under the auspices of the sovereign wealth fund, has provided most of the $55mn of debt and equity raised by HyperSpace. Riyadh Season is led by Turki al-Sheikh, who chairs the General Entertainment Authority.

Shopping centres must find that "cool factor" to draw consumers in, Alexander Heller, co-founder and chief executive of HyperSpace, said. "Today, within that ecosystem, you're looking at something that's much more experience-driven."

Saudi Arabia is seeking to reduce its dependence on oil revenues and is investing in other areas, such as electric vehicle production, sport and tourism. It has set out a target to become a gaming hub, and this year spent $4.9bn to acquire US-based games developer Scopely.

The country is spending heavily on deals to pursue these goals, but there are questions about whether it can attract foreigners in large numbers.

> Nearly half a million enthusiasts have paid $34 each to visit the first site over nine months

Saudi Arabia, which is not a traditional tourism destination, wants to lure 100mn visitors annually by the end of the decade.

HyperSpace creates elaborate parks that feature a mix of digital and physical entertainment including gaming. Nearly half a million enthusiasts paying $34 each have flocked to its first site in Dubai, a 40,000-square-foot park, since it opened there nine months ago.

The Riyadh-based company plans to expand in Saudi Arabia and in the US. "There's a big focus on expanding the business", Heller said.

Riyadh was an attractive partner, Heller said, given the importance of shopping centres to Saudis, who are also highly engaged in social media. HyperSpace is keen to be behind the push to attract consumers back to shopping centres, which have been hit by a rise in online shopping.

"We saw an opportunity in the location-based entertainment space and how that fit into the future of the retail ecosystem," he said.

Galaxy Interactive, a New York-based venture capital firm focused on gaming, led the latest funding round, which includes other international investors.

HyperSpace plans to open a park in Riyadh in six weeks and another in Dubai over the next few months.
Ivan Levingston

Technology. System risks

Imperfect guard-rails for AI systems lead to push for fresh safety measures

Google Deepmind, OpenAI and Anthropic want products to learn from a 'constitution'

MADHUMITA MURGIA
ARTIFICIAL INTELLIGENCE EDITOR

Two of the biggest artificial intelligence companies announced advances in consumer AI products last week.

Microsoft-backed OpenAI said its ChatGPT software could "see, hear and speak", conversing using voice alone and responding to user queries in pictures and words. Facebook owner Meta announced that an AI assistant and celebrity chatbot personalities would be available for billions of WhatsApp and Instagram users to talk to.

But as these groups race to commercialise AI, the "guard-rails" that prevent the systems going awry — such as generating toxic speech and misinformation, or helping commit crimes — are struggling to evolve in tandem, say AI leaders and researchers.

In response, companies including Anthropic and Google DeepMind are creating AI "constitutions" — a set of values and principles that their models can adhere to, in an effort to prevent abuses. The goal is for AI to learn from these fundamental principles and keep itself in check, without extensive human intervention.

"We, humanity, do not know how to understand what's going on inside these models, and we need to solve that problem," said Dario Amodei, chief executive of AI company Anthropic. Having a constitution in place made the rules more transparent and explicit so anyone using it knew what to expect. "And you can argue with the model if it is not following the principles."

The question of how to "align" AI software to positive traits, such as honesty, respect and tolerance, has become central to the development of generative AI, the tech underpinning chatbots such as ChatGPT, which can write fluently, create images and code that are indistinguishable from human creations.

To clean up the responses generated by AI, companies have largely relied on a method known as reinforcement learning by human feedback, which is a way to learn from human preferences.

To apply RLHF, companies hire large teams of contractors to look at the responses of their AI models and rate them as "good" or "bad". By analysing enough responses, the model becomes attuned to those judgments, and filters its responses accordingly.

This works to refine an AI's responses at a superficial level. But it is primitive, according to Amodei. "It's . . . not very accurate or targeted, you don't know why you're getting the responses you're getting, [and] there's lots of noise."

Companies are experimenting with alternatives to ensure their AI systems are ethical and safe. Last year, OpenAI hired 50 academics and experts to test the GPT-4 model, which powers the premium version of ChatGPT in a process known as "red-teaming".

Over six months, this team across a range of disciplines from chemistry to nuclear weapons, law, education and misinformation were hired to "qualitatively probe [and] adversarially test" the model, in an attempt to break it. Red-teaming is used by others such as Google DeepMind and Anthropic to spot their software's weaknesses and filter them out. While RLHF and red-teaming are key to AI safety, they don't fully solve the problem of harmful outputs.

Researchers at Google DeepMind and Anthropic are working on developing constitutions that can be followed by AI. For instance, Google DeepMind, the AI research arm of the search group, published a paper defining its rules for its chatbot Sparrow, which aimed at "helpful, correct and harmless" dialogue. One of the rules asks the AI to "choose the response that is least negative, insulting, harassing, or hateful".

> 'We do not know how to understand what's going on inside these models, and we need to solve that'

"It's not a fixed set of rules . . . It's really about building a flexible mechanism that . . . should be updated over time," said Laura Weidinger, a research scientist at Google DeepMind who authored the work. The rules were determined by employees at the company, but DeepMind plans to involve others. Anthropic has published its own AI constitution, rules compiled by company leadership that draw from DeepMind's published principles, as well as external sources such as the UN Declaration of Human Rights, Apple's terms of service, and "non-Western perspectives".

The companies warn that these constitutions are works in progress, and do not wholly reflect the values of all people and cultures, since they were chosen by employees.

The constitution method, however, has proved far from foolproof.

In July, researchers from Carnegie Mellon University and the Center for AI Safety in San Francisco were able to break the guard-rails of all the leading AI models, including OpenAI's ChatGPT, Google Bard and Anthropic's Claude. They did so by adding a series of random characters to the end of malicious requests, such as asking for help to make a bomb, which managed to circumvent filters.

The current systems are so brittle that you "use one jailbreak prompt and then the thing goes completely off the rails and starts doing the exact opposite", said Connor Leahy, a researcher and chief executive of Conjecture, which works on control systems for AI.

The biggest challenge facing AI safety, researchers say, is figuring out whether the guard-rails work. It is difficult to build good evaluations for AI guard-rails because of how open-ended the models are, which can be asked an infinite number of questions and respond in myriad ways. "It's a little like trying to figure out a person's character by talking to them. It's just a hard and a complex task," said Anthropic's Amodei.

Rebecca Johnson, an AI ethics researcher at the University of Sydney who spent time at Google last year analysing its language models such as LaMDA and PaLM, said the internal values and rules of AI models were most often created by AI engineers and computer scientists, who came with a specific worldview. "Engineers try and solve things so it's completed and done. But people coming from social science and philosophy get that humanity is messy, and not to be solved. We have to start treating generative AI as extensions of humans; they are just another aspect of humanity."

See Opinion

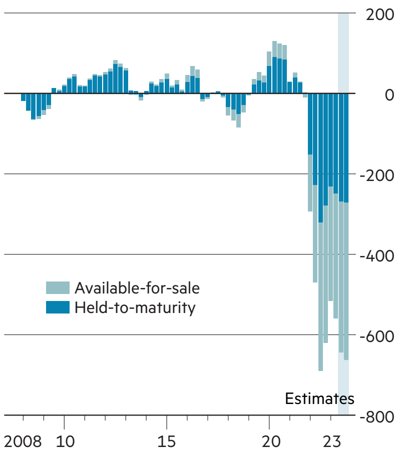
COMPANIES & MARKETS

Bond sell-off raises fears of trouble ahead

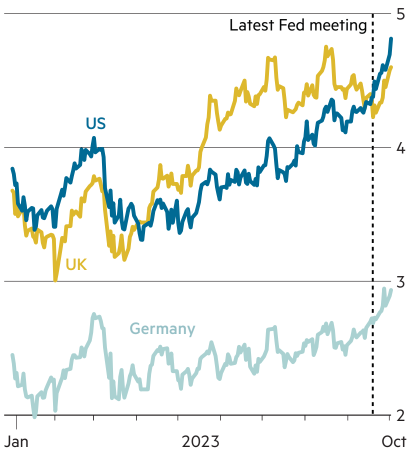
Investors and policymakers alarmed by danger of heavy losses for banks, insurers, pension funds and asset managers

OWEN WALKER, IAN SMITH, WILL LOUCH AND JOSEPHINE CUMBO — LONDON
STEPHEN GANDEL, ANTOINE GARA AND HARRIET CLARFELT — NEW YORK

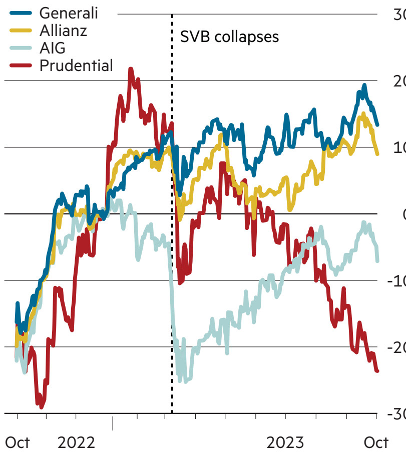
Fresh interest in banks' rate issues
Unrealised losses on lenders' balance sheets ($bn)



Fed's 'higher for longer' signal
Benchmark 10-year bond yield (%)



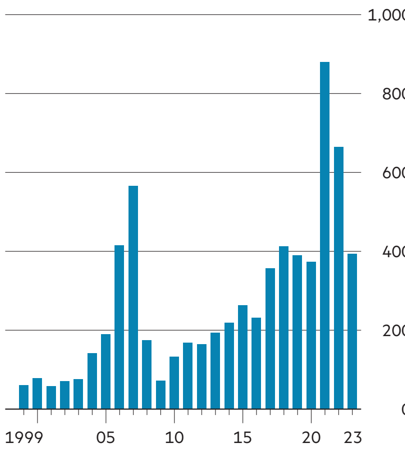
Insurers' stocks shaken
Share prices rebased to Jan 2023 (%)



Higher yields generally good for UK pension funding levels
Assets as a % of liabilities

Junk spreads spring wider
Spread between yields on US low-grade bonds and treasuries (percentage points)*

Private equity deal volumes sink
Value of global deals, Q1 to Q3 only ($bn)



Sources: FDIC; Trepp; LSEG; PPF; ICE Data Services

* Ice BofA high-yield index

A sell-off in bond markets has pushed borrowing costs to their highest levels in a decade or more.

It means potentially heavy losses for banks, insurers, pension funds and asset managers that own trillions of dollars of sovereign and corporate debt after loading up in recent years.

Policymakers and investors are wary that the latest round of sharp moves could inflict severe damage on various parts of the system.

"We are watching this . . . very carefully to see if something breaks," said Salman Ahmed, global head of macro at Fidelity International.

US banks

Paper losses on the most opaque part of US banks' bond portfolios are close to $400bn — an all-time high and 10 per cent above the peak at the start of the year that caused the collapse of Silicon Valley Bank — according to Matthew Anderson, an analyst at bond data firm Trepp.

Most banks, and in particular the largest ones, will not have to sell and so will never realise those losses.

But the implosion of midsized US lender SVB in March refocused the minds of regulators and investors on the risks lurking in bank bond portfolios.

After receiving an avalanche of deposits from venture capital funds, SVB ramped up investment in a $120bn portfolio of highly rated government-backed securities. But when rates rose sharply last year, the value of the portfolio fell by $15bn, which was almost equal to the bank's total capital, making it vulnerable to a wave of customers pulling their deposits.

At the same time, higher rates create more incentive for depositors to move their money, forcing banks to pay up to keep accounts — which ultimately hurts profits.

Shares of Western Alliance Bancorp, a Phoenix-based regional bank that like the former SVB caters to cash-challenged start-ups, have fallen 20 per cent since bond yields began their renewed rise in late August.

Among the big banks, Bank of America has been the worst performer. Shares of BofA — which at the end of the second quarter had nearly $110bn in unrealised losses, the most of any bank in the US — hit a 52-week low on Wednesday of just below $26.

In all, the shares of the US's largest banks, as measured by the KBW Nasdaq Bank index, have dropped an average of 8.5 per cent in the past month, erasing tens of billions of dollars from investors' portfolios.

European banks

If paper losses on bond portfolios were realised, they would have caused a 200-basis-point hit to the common equity tier 1 ratios of the largest US lenders at the end of June, according to Stuart Graham, head of banks at Autonomous Research.

By comparison, the impact for European lenders fell from 100bp to 80bp in the first half of this year, partly in response to banks reducing their bond portfolios. But Graham said he expected the impact to be higher once banks reported their third-quarter numbers.

In response to SVB's collapse, the European Central Bank carried out an industry-wide probe into eurozone bank exposure to rapidly rising interest rates to try to understand how risk could spread to other sectors.

The results, published in July, showed that the 104 banks supervised by the ECB had combined net unrealised losses of €73bn in their bond portfolios in February. The analysis showed that those losses would increase by an additional €155bn in the worst-case scenario of the regulator's bank stress tests.

"This should be regarded as an unlikely hypothetical outcome, as banks' amortised-cost portfolios are designed to be held to maturity and . . . banks would typically turn to repo transactions and other mitigating actions before liquidating their bond positions," the ECB said.

The implosion of Silicon Valley Bank refocused attention of regulators and investors on risks lurking in bank bond portfolios
Brian Snyder/Reuters

Insurers

Life insurers are big holders of bonds, which they use to back liabilities such as pension obligations. Their share prices were hit hard following the collapse of SVB.

Insurers can often hold bonds to maturity, riding out market falls, while higher interest rates generally lift their solvency levels. But the concern is that a speedy rise in rates encourages customers to cash in long-term products, forcing insurers to sell bonds and other matching assets at a loss.

The worst-case scenario was that "policyholder behaviour changes, such that the insurers become forced sellers", said Douglas Baker, a director at Fitch Ratings.

European insurers including Generali reported a rise in so-called lapses at the start of the year in countries such as Italy and France, particularly in policies sold through banks, where customers are more likely to switch. Generali said the picture had improved in the second quarter.

The failure of Eurovita, an Italian life insurer backed by UK private equity firm Cinven, was another sign of trouble. It was taken into special administration by the regulator this year after a build-up in unrealised losses due to fast-rising rates, alongside what Italy's central bank described as "inadequate risk management", left it with a capital hole.

Pension funds

In general, higher yields on government debt are good news for UK pension funds because it improves their funding position. But a year ago, a sudden sell-off in gilts following then-prime minister Liz Truss's "mini" Budget sparked a crisis in the pensions industry.

Many UK pension schemes use a strategy known as "liability-driven investment", which aims to hedge against moves in gilt yields and ensure that long-term obligations to pensioners stay matched with long-term assets.

As investors fretted about the scale of proposed government borrowing and dumped gilts, yields on UK government debt soared.

That meant that the pension schemes' hedging strategies had to be supported with more collateral.

To meet those collateral calls, pension funds cashed in their most liquid assets: gilts. That created a spiral where forced sales of gilts sent prices tumbling further and yields climbing higher — and then required the pension funds to stump up yet more collateral.

The speed and scale of the move in UK bond yields meant that many schemes could not find enough ready cash and had to sell less liquid assets, typically at a haircut.

The latest rise in bond yields has once again led to pension funds facing collateral calls. This time, consultants say the system is coping due to better controls on leverage and liquidity.

However, they warned that if bond yields continued to rise, it could force some pension plans to dump less easily traded assets.

"Further yield rises might test some funds with tighter liquidity buffers," said Simeon Willis, chief investment officer with XPS, a pension investment adviser.

"While there is no imminent possibility that the pension schemes are going to experience what they did a year ago from the rapid rise in gilt yields, what they are still exposed to is a longer-term persistent rise in yields chipping away at their asset base and leading them to the point where they need to further sell down illiquid assets, at a haircut."

> 'We are watching this . . . very carefully to see if something breaks'

Debt markets

Corporate debt markets have come under intensifying pressure from the sharp rise in government bond yields, which feeds through to companies' borrowing costs.

The average yield on US junk bonds climbed above 9.3 per cent this week, up from less than 9 per cent at the end of September and 8.5 per cent a month earlier.

In turn, the premium that lowly rated borrowers pay above the US government to issue debt has also risen.

The moves have been more pronounced at the riskiest end of the credit spectrum, with the average spread on "triple C and lower" bonds expanding on Tuesday by its most in a day since March — when banking sector ructions stoked worries over tougher lending standards.

Many companies have also been able to hold off from refinancing debt, after taking advantage of ultra-low interest rates at the start of the pandemic to borrow cheaply and push out maturities.

However, a flood of debt will come due in 2025-26, and issuers of junk loans, which have floating interest rates, are already feeling the effects of US Federal Reserve tightening.

Rising yields "put more pressure on companies that are more levered or properties that are more levered", said Greg Peters, co-chief investment officer of PGIM Fixed Income. "You're going to experience . . . a higher than typical default and distressed rate environment as these companies that really survived largely in part due to cheap financing start to unwind."

Private equity

The prospect of interest rates staying higher for longer is bad news for private equity. Dealmaking had already dropped over the past 12 months as buyout firms struggled with the impact of rising borrowing costs.

"Private equity has for a long time been synonymous with 'leveraged buyout', so it goes without saying that the 'leverage' part becomes more expensive for current or prospective portfolio companies," said Haakon Blakstad, chief commercial officer at Validus Risk Management.

The slowdown in the deal cycle has made it more difficult for firms to sell assets and return money to their investors. And the ability of companies to service their debt is starting to appear more strained.

Researchers at Carlyle Group have warned that the rising cost of debt has dramatically lowered interest coverage ratios across the private equity universe, a metric that many lenders and rating agencies use as a gauge of whether companies can service their debts with operating profits. Together with inflation and a slowing economy, that could lead to more buyout-backed companies running into trouble.

Rising long-term interest rates will also put pressure on private real estate valuations, where firms such as Blackstone and Brookfield have become some of the largest property owners.

Private real estate valuations have traditionally been done using benchmark rates of 10 years or longer, which up until recent months had risen far less than short-term rates. Were longer-term rates to stay high for a prolonged period, it might force property owners to cut valuations anew just as trillions of dollars in loans are due to mature in the coming years.

Additional reporting by Mary McDougall in London

See Markets

Corporate misconduct

DoJ policy will 'incentivise' crime, says Warren

STEFANIA PALMA — WASHINGTON

US senator Elizabeth Warren has urged the Department of Justice to reverse a new policy aimed at encouraging companies to report misconduct at businesses they buy, calling it a "massive step backwards" in the clampdown on anti-competitive deals.

In a letter sent yesterday and seen by the Financial Times, the Democratic senator from Massachusetts said the "new policy represents a betrayal of the department's mission 'to uphold the rule of law' and a massive step backwards in the Biden administration's approach to preventing anti-competitive mergers".

She added: "This policy would reduce competition and encourage corporate crime — and you should act quickly to reverse it."

The letter came a day after Lisa Monaco, deputy US attorney-general, announced a new enforcement policy that would offer "safe harbour" to companies that voluntarily disclosed malfeasance at businesses they acquired.

Monaco had told the FT that the measures sought to "incentivise that type of responsible corporate behaviour". The DoJ did not want to discourage companies with strong compliance programmes from purchasing businesses that may "have a history of misconduct", she added.

Warren disputed this argument, saying the measures "would incentivise corporations to engage in illegal activity of all kinds — knowing that they could simply wipe the slate clean during a merger".

The senator, a strong advocate of the tougher antitrust enforcement stance adopted by the Federal Trade Commission and the DoJ under President Joe Biden, also said the new plan "encourages more mergers and makes it easier for companies that have engaged in illegal activity to get bought up — reducing competition and eliminating penalties for bad behaviour".

The DoJ did not immediately respond to a request for comment. Under the new policy, it will not bring charges against an acquirer that reports wrongdoing committed by a company it buys within six months of the deal closing, whether the illegal activity was identified before or after the purchase.

Self-disclosing companies must then rectify the misconduct within a year of the deal's completion, although the precise timelines are subject to prosecutors' discretion.

The policy change comes as the number of major agreements resolving criminal cases against companies that have national security implications has doubled since last year, Monaco said earlier. "We are operating in a new era of greater complexity, greater geopolitical risk for corporations, multinational corporations in particular," she added.

Since taking office in 2021, Monaco has focused on boosting companies' voluntary self-disclosure as part of a broader set of enforcement reforms.

Automobiles

GM launches premium EV range in Europe

PETER CAMPBELL — LONDON
CLAIRE BUSHEY — CHICAGO

General Motors is launching an all-electric range fronted by its Cadillac brand in Europe this week, six years after the US carmaker sold its mass-market brands in the region following a struggle with profitability.

The company said it would roll out slowly, beginning with sales in Switzerland from today and moving to Sweden and France in time, with the aim of expanding to a handful of markets in the next two years.

The move helps GM build scale for its electric business but pits the company's upmarket brand — which has ceded share to German rivals in the US — against local marques, such as BMW and Mercedes-Benz which have entrenched customer loyalty.

It will sell the Lyriq, the first electric Cadillac model, and will expand its line-up in the future to other models — and potentially other brands. The Lyriq, which sells in the US for $58,000, will start from SFr82,000 ($90,000).

GM has historically struggled in Europe. It wound down its mass-market Chevrolet brand in 2016. A year later it sold its lossmaking Opel and Vauxhall brands to PSA, which now belongs to Chrysler owner Stellantis, for €2.2bn, following almost two decades in which it failed to turn a profit in Europe.

> The Cadillac Lyriq, which sells in the US for $58,000, will start from SFr82,000 ($90,000)

Although the company never officially stopped selling some petrol Cadillacs or its Corvette sports car in the region, sales had dwindled. GM said yesterday that its business would be "all-electric" in the region in future, with any "niche demand" for older models to be met by "independent distributors".

Chief executive Mary Barra said in 2017 that pulling back in the region was a "difficult decision" for the Detroit carmaker, which has since focused on the North American and Chinese markets. Last year she said GM wanted to return to the market with electric vehicles, but did not detail its strategy.

Europe is a hotbed of electric vehicle sales, led by markets such as Norway, and GM believes that competing in the region will help it understand how to increase sales in the US and China.

The move also allows the company to use online-only sales, something that it would struggle to offer in the US because of the laws around use of dealerships.

GM's plan is to focus on the premium end of the market, where customers have more disposable income.

Jaclyn McQuaid, GM's managing director for Europe, said the car's "bold design stands out against other cars in the premium vehicle category, making it the right choice for the European market".

Sunak's boost for EV ditherers is a blow for carmakers

Nathalie Thomas

Britain's car industry has a problem: ditherers like me.

I have been planning to buy an electric vehicle for several years. This process has so far been more enjoyable than buying the actual car. I have conducted in-depth research on charging options, affordability and projected prices. And I have procrastinated.

Just when it looked as if I could put off a purchase no longer, Rishi Sunak has come to my rescue. The prime minister has delayed the ban on the sale of new petrol and diesel cars by five years to 2035. My licence to wait around has been extended.

The problem for car manufacturers is they face mandatory annual EV sales targets. Coming into force in January, these aim to ensure 80 per cent of new car sales will be zero emission by 2030. Manufacturers will be fined £15,000 per car if they don't comply, although they can make up shortfalls in the first three years through higher sales later on.

The government has described the regulation as "the most ambitious . . . of its kind in any country in the world". Yet few consumers will have heard of the "zero emission vehicle mandate".

Carmakers worry that buyers — like me — will focus instead on the delayed ban. This sends a message that there's no rush to switch to an EV.

It will be months before monthly car sale figures show whether Sunak's U-turn is hitting sales. But a survey by UK online car marketplace Auto Trader following the prime minister's announcement showed a near doubling — to 37 per cent — in the number of respondents who said they would never buy an EV compared to an earlier poll.

The car industry is worried. It is lobbying for help to persuade drivers to switch to electric. Of course, much power lies in vehicle makers' own hands. The cheaper they make EVs, the more consumers will be convinced.

Carmakers are right to highlight the confusing signals though. One source of potential help would come at zero cost to the government. Simply by emphasising that the UK still wants to decarbonise passenger cars, and quickly, the government could cut through some of the mixed messaging of recent weeks.

Another sensible option would be to tackle inequalities around EV charging. Drivers with access to home chargers pay substantially less than those who rely on the public charging network.

The weighted average price of charging an electric car on the public network in August was 54p per kilowatt hour when using slower chargers, according to the charging app Zap-Map. For rapid devices this rose to 76p/kWh.

Compare this to domestic electricity prices, where the energy price cap limits the price utilities can charge to 27p/kWh before daily standing charges. VAT also adds to the cost of public charging: it is levied at 20 per cent, versus 5 per cent on domestic electricity bills.

Drivers who rely on public chargers could pay about £500 a year more than those who do most of their charging at home, according to a Zap-Map analysis.

So far motorists' response to these price differences has been muted, given that an estimated 80 per cent of current EV drivers have access to a home charger. Though in some cities — such as London, where off-street parking is scarce — EV charging can involve risky expedients such as hanging cables out of windows.

> Manufacturers still face mandatory targets that aim to ensure 80% of sales are zero emission by 2030

But drivers will become increasingly aware of the inequality as the number of EVs and plug-in hybrids on the UK's roads expands beyond the current 4 per cent of all cars. Reducing VAT on public charging so that it is in line with domestic electricity bills seems an obvious way to pre-empt some of the problems, although Treasury officials argue the lower rate was introduced to help reduce domestic energy bills and wasn't targeted at charging EVs at home.

"Considering that only 2 per cent of all cars are [pure] electric at the moment, I can't see [a VAT cut] having a huge fiscal impact," said Melanie Shufflebotham, co-founder of Zap-Map.

Charging companies are, unsurprisingly, also on side. Trade body Charge UK says the estimated 30-40 per cent of drivers who don't have access to a driveway and have to use the public network are essentially paying a "kerb tax".

Following Sunak's U-turn, carmakers have found themselves between a rock and a hard place. Given he's put them there, it's only fair the prime minister extends a hand to help them out.

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Healthcare

Abcam rejects co-founder's criticism of $5.7bn sale to Danaher

HANNAH KUCHLER

Abcam has defended the handling of its proposed $5.7bn takeover by Danaher, insisting the UK life sciences company rejected inadequate bids and pushed the US group to increase its offer.

Alan Hirzel, chief executive of the Cambridge-based company, dismissed accusations by its co-founder Jonathan Milner, who plans to vote against the deal and wants to unseat the board and take over as CEO.

"This has been a robust process, a competitive process right to the end, and the board has recommended the highest offer," Hirzel told the Financial Times.

Milner, who had a 6.1 per cent stake in the company last month, has argued that the offer materially undervalues Abcam, saying Danaher's forecasts for Abcam's performance were substantially lower than its own guidance. He accused the board of not giving other buyers enough consideration.

But in a shareholder circular due to be published yesterday, Abcam's board said the $24 a share offer was the "highest and best price" it had received after engaging with 30 potential counterparties. It said the nearest competing offer had been $22.50, and that Danaher had raised its offer twice from an initial $20.50.

Hirzel told the FT he had led a transformation of the company that had increased the share price more than fivefold since he took over in 2014. He said Danaher would allow Abcam to continue operating independently, while collaborating in areas such as diagnostics and bioprocessing.

> 'This has been a robust process . . . and the board has recommended the highest offer'

He added that Danaher and the other bidders had all based their valuations on the company's published forecasts.

Abcam, which creates products for scientists to use in research such as custom antibodies, was founded in 1998 as a spinout from the University of Cambridge. Milner was chief executive until 2014, when he was replaced by Hirzel, and remained on the board until 2020. He argues that Abcam has been mismanaged since his departure and he launched a campaign in May to overhaul the board.

The company said the $24 a share offer was at a 39 per cent premium to the undisturbed share price on May 16, before Milner announced his intention to call an extraordinary general meeting, and a 48 per cent premium to the volume-weighted average price of $16.21 for the 30 trading days to May 16.

Milner questioned whether Abcam management prioritised its bonuses over the best deal for shareholders. But the company said management pay had not changed because of the deal.

Abcam last year dropped its Aim listing in favour of a sole listing on Nasdaq. Milner believes it could also benefit from a UK listing and told the FT last month that he thought Abcam's UK headquarters and jobs were in danger.

The company said yesterday that Danaher was committed to Abcam's current geographic presence.

Technology

Ofcom calls for cloud computing antitrust probe

Amazon and Microsoft have 70%-80% of market, watchdog's study finds

TIM BRADSHAW

Ofcom has referred the $500bn cloud computing industry to the Competition and Markets Authority for an antitrust investigation, after the UK communications regulator found that Microsoft and Amazon dominated the market.

The call yesterday for further scrutiny in the UK comes as EU and US regulators also examine cloud computing companies after customers complained about being "locked in" to a single provider. Regulators fear prices and profits may be higher than they would be in a less concentrated market. Competition authorities in France, the Netherlands and Japan are already investigating the market. Cloud computing has become a vital way for companies to store data and deliver internet services, with the development of new artificial intelligence products only increasing demand for data centre resources.

> '[Ofcom is] concerned that a number of customers may face significant barriers [to switching]'

Amazon Web Services and Microsoft's Azure command a combined share of 70 to 80 per cent of the market, Ofcom found after a year-long study. Google is their largest competitor with a 5 to 10 per cent share. "Some UK businesses have told us they're concerned about it being too difficult to switch or mix and match cloud provider, and it's not clear that competition is working well," said Fergal Farragher, the Ofcom director responsible for the market study.

According to market researcher Gartner, global customer spending on so-called public cloud services grew 19 per cent in 2022 to $490.3bn and is projected to rise another 21 per cent, to almost $600bn, this year. The CMA pegs its value in the UK at £7.5bn.

Ofcom's market study concluded that customers faced barriers including high "egress fees" to leave a service and technical challenges that inhibited switching to a different cloud provider, while tech companies also offered discounts for using a single cloud provider.

The watchdog wrote that it was "concerned that a material number of customers, especially those with more complex requirements, may face significant barriers" to switching between providers or using multiple cloud platforms that better suit particular applications.

It added: "High levels of profitability for the market leaders AWS and Microsoft and a gradual increase in market concentration are consistent with limits to the overall level of competition."

The CMA will now begin its own investigation, which could lead to intervention in the market.

Microsoft said it would "engage constructively" with the CMA. "We are committed to ensuring the UK cloud industry remains innovative, highly competitive and an accelerator for growth across the economy," it added.

Amazon said it did not charge "separate fees for switching data to another IT provider". But Farragher said Ofcom's study found that "all cloud providers, including AWS, charge these [egress] fees for moving data outside of their cloud".

AWS said: "We disagree with Ofcom's findings and believe they are based on a fundamental misconception of how the IT sector functions, and the services and discounts on offer. Any unwarranted intervention could lead to unintended harm to IT customers and competition. AWS will work constructively with the CMA."

In a hole
Thames Water urges curbs on pollution fines

Thames Water said it will need regulatory changes including a limit to pollution fines and an increase in permitted returns to persuade shareholders to inject much-needed equity into the debt-laden business.

The utility, which provides water and sewage services to around 25 per cent of England, has asked shareholders, which include sovereign wealth, private equity and pension funds, to inject more than £2.5bn of equity into the business to stabilise its finances. It is also seeking approval from the regulator Ofwat for a 40 per cent increase in customer bills by 2030.

But in a business plan submitted to Ofwat yesterday, Thames Water said the equity injections were conditional on the regulator agreeing a "material move up in the allowed rate of return".

It also said it required an agreement on the "maximum level of penalties we can incur". Last week it was fined £100mn for performance failures but it faces other court cases and penalties.

Thames Water said it would not be able to deliver its £18bn business plan, which covers spending between 2025 and 2030, if it does not receive the equity injection.

Britain's largest privatised water utility is struggling with higher financing costs on its £16bn debt, as well as a public outcry over sewage overflows and leakage.

In June its chief executive Sarah Bentley stepped down amid concerns over the company's financial stability. The government has drawn up contingency plans for a temporary renationalisation.
Gill Plimmer

Maureen McLean/Shutterstock

Financials

Investors back Clipway private equity fund

WILL LOUCH AND HARRIET AGNEW — LONDON
ANTOINE GARA — NEW YORK

US tech investor General Atlantic and French asset manager Carmignac are backing a London investment manager that is buying out stakes in private equity funds, as they seek to diversify into this fast-growing strategy.

General Atlantic, which is best known for backing TikTok parent company ByteDance, and Paris-based Carmignac have bought minority holdings in Clipway, a firm set up by former Ardian senior investor Vincent Gombault.

They are also committing cash to the firm's debut fund, which is aiming to raise $4bn, according to people briefed on the plan. Clipway was established this year and has raised about a quarter of this target, said one.

Clipway declined to comment.

The move follows deals in which asset managers, including Ares, Franklin Templeton and PGIM, have raised exposure to the secondaries markets. The private equity secondaries market hit more than $100bn last year, doubling since 2017, a Lazard report says.

Blackstone and Goldman Sachs raised their largest-ever funds for secondary deals this year, a market offering large investors the chance to exit illiquid private market investments early.

Gombault, who spent more than two decades at Ardian, played an instrumental role in building the secondaries business of the French private equity investment manager, and it has since grown to become its largest unit.

> General Atlantic and Carmignac are committing cash to the debut vehicle, which aims to raise $4bn

Ardian is itself seeking to raise about $25bn for its first fund since Gombault left in December 2020. The Paris-based firm, headed by Dominique Senequier, raised $19bn in 2020 for this strategy.

Clipway has hired executives from Coller Capital and appointed David Enriquez, a managing director at Rothschild's merchant bank in New York, as a partner. It now employs more than 20 people in London and New York.

General Atlantic, which manages $77bn in assets, said in March it was teaming up with an Abu Dhabi state fund and the emirate's largest listed company to launch an investment group. A month later the New York-based firm said that it had acquired private credit firm Iron Park.

The Clipway deal also reflects how mainstream asset managers such as Carmignac are betting on assets outside traditional bonds and equities.

The Paris-based asset manager has been increasing its exposure to private markets by striking partnerships with smaller firms. It is a cornerstone investor in UK private equity firm Cap10, a new buyout house.

Carmignac's assets under management have dropped 40 per cent in the past five years, from €50bn to €30bn.

Technology

Graphcore warns of need to raise fresh capital

TIM BRADSHAW

Graphcore, the chip designer that became one of the country's most valuable private technology companies in 2020, has warned that it needs to raise new funds from investors within months after reporting falling revenue and increased losses last year.

The need to raise new capital by next May represented a "material uncertainty" over its ability to continue as a going concern, Graphcore said in its latest accounts.

Bristol-based Graphcore has raised more than $600mn from investors, according to deal tracker PitchBook, and was valued at about $2.5bn in 2020, as it pitched itself as an alternative to Nvidia's specialised chips for artificial intelligence applications.

However, it was dealt a blow in 2020 when Microsoft, an early investor, opted not to continue using Graphcore's chips in its cloud-computing platform.

Despite making technical advances, Graphcore has struggled to win large-scale corporate customers and was forced to make job cuts late last year.

Accounts filed at the UK's Companies House registry this week showed that Graphcore's revenues in 2022 fell 46 per cent to $2.7mn, which it blamed on "headwinds in the wider macroeconomic environment" and delayed hardware purchasing by "key strategic customers", including a "major" buyer in China.

> The chip designer has struggled to secure big customers and was forced to cut jobs late last year

Pre-tax losses rose 11 per cent to $204.6mn, leaving it with $157mn in cash at the end of the year.

The company's cash flow forecast "indicates that there will be a need for further funding" before reaching break-even, Graphcore said in its accounts.

"The forecast indicates that the group and company will require further investment to finance the existing requirements over the 12 months from the date of signing these financial statements [in May 2023]."

Graphcore said that discussions with potential investors had not yet reached agreement, but the company's directors "expect that appropriate funding can be secured before it is required".

The accounts were prepared on a "going concern" basis, as auditors PwC signed off on Graphcore's ability to continue operations.

But the company's directors warned that the need to raise additional funding and hit its revenue and cost forecasts raised a "material uncertainty in relation to going concern".

Graphcore declined to comment on the status of its fundraising talks.

The AI processor market is dominated by Nvidia, whose A100 and H100 chips have become one of the most sought-after commodities in Silicon Valley.

Equities. Meme echoes

Froth fears as ‘junk rally’ sends India small-caps to lofty heights

Fair wind: one of the best-performing Indian stocks is turbine maker Suzlon Energy

Retail traders sharing tips on WhatsApp help drive big gains in previously troubled stocks

CHLOE CORNISH — MUMBAI

Indian mid and small-cap stocks have soared in value over the past six months as retail investors and mutual funds snap up shares in previously troubled firms, sparking concerns that some parts of the market have become too frothy.

The Nifty Midcap 50 index has rallied by 39 per cent since late March — its lowest level over the past year — while broad gauges of smaller stocks are also making gains.

The Nifty MidSmallcap 400 has risen 38 per cent over the same period. In contrast, the Nifty 50 index of India's biggest listed companies is up just 15 per cent.

The rally, which has lifted stocks that have previously suffered large losses as well as state-controlled firms, has partly been driven by retail investors betting directly on stocks — with WhatsApp groups publishing share tips becoming increasingly popular.

Wealthy individuals and mutual funds have also got involved.

The buying spree has some echoes of the US's meme stock frenzy of 2021 when retail investors rapidly drove up the price of stocks such as GameStop and AMC far beyond what many fund managers saw as their fundamental value.

"When we see there is such euphoria around and especially names which have historically not delivered consistent returns, we don't know how sustainable it is," said Tej Shah, a portfolio manager at Mumbai-based Marcellus Investment Managers.

One of the best-performing Indian stocks is Suzlon Energy, a wind turbine maker whose mammoth debt pile brought it close to bankruptcy in 2015 and which is now in the midst of a turnaround. Its shares have rocketed 265 per cent in the past six months.

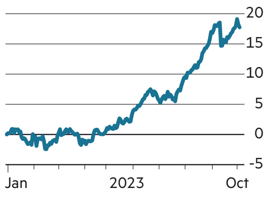
Another outperformer is majority state-owned train infrastructure builder Rail Vikas Nigam, whose shares have soared 126 per cent.

Mazagon Dock Shipbuilders, a defence ministry enterprise 85 per cent owned by the government, is up 211 per cent in six months and the shares are trading at a price/earnings multiple of almost 38 times compared with an average of nearly 23 times among stocks in the wider index.

"They are either turnaround stories or companies which have historically reported large amount of losses, or they are state-owned entities," said Shah.

Retail traders and mutual funds drive rally in smaller stocks

Performance of Nifty MidSmallcap 400 vs Nifty 50 large-cap index (%)



Source: LSEG

The current top 15-20 gainers over the past 12 months in a wider benchmark of larger and smaller companies, the S&P BSE 500 index, "have historically delivered, in the past 10 years, returns which have either been next to nothing or negative", he said.

One fund manager, who asked not to be named, described it as a "junk rally".

Kotak Institutional Equities wrote last month: "We see limited point in trying to find fundamental reasons behind the steep increase in stock prices of several mid-cap and small-cap stocks."

The brokerage added: "There is no meaningful change in the fundamentals of most companies; in fact, they have worsened in many cases," adding that it was dropping its mid-cap portfolio recommendations.

The rise in small- and mid-cap shares has partially been fuelled by optimism about India's growth prospects as the world's most populous country bounces back from the coronavirus pandemic.

The IMF projects India's economic growth at 6.1 per cent this year, the fastest of any major economy.

While many retail investors are betting directly on small and mid-caps, R. Venkataraman, chair of Mumbai-based brokerage IIFL Securities, said the main buyers were mutual funds, as well as wealthy individuals who are "seeing tremendous returns".

Investors have ploughed Rs47.4bn into mutual funds investing in mid-cap stocks and Rs109.4bn into small-cap funds from April to June, the most recent quarterly figures available.

In contrast, Rs33bn flowed out of large-cap portfolios during that period, according to data from the Association of Mutual Funds in India.

> 'GameStop penny craze was a pure speculative event. We do not see any similarities'

Venkataraman said the rally in small and mid-cap public sector banks, which have only very small free floats and whose prices can be influenced by relatively few trades, was comparable to the meme stock craze in the US.

But Vijay Chandok, managing director at financial services and broking firm ICICI Securities, dismissed any such comparison.

"GameStop penny craze was a pure speculative event," said Chandok. "We do not see any similarities" with Indian equities.

Some money managers said there was no cause for alarm, arguing that there is a vast range of small- and mid-cap companies and that price rises are largely being driven by better earnings.

"Structurally a lot of the rally, at least in our stocks, has actually been driven by improved [financial] performance," said Gaurav Narain, manager of the India Capital Growth fund, a small and mid cap fund, at Mumbai-based Ocean Dial Asset Management. He said his fund was up 27 per cent this year.

Moves by multinational companies to diversify supply chains away from China have "absolutely been a bonanza for a lot of these companies", Narain said, adding that a bruising period for India's economy prior to the pandemic had prompted many groups to clean up their balance sheets.

Trideep Bhattacharya, chief investment officer at Mumbai-based Edelweiss Asset Management, called Kotak's mid-cap portfolio dumping "alarmist".

But he conceded that, "over the last couple of months, we've seen pockets of irrational exuberance."

As a result, "we are now a little more selective in mid- and small-caps."

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Fixed income

Sunac makes $10bn debt restructuring breakthrough

CHAN HO-HIM — HONG KONG
THOMAS HALE — SHANGHAI

Chinese developer Sunac has won court approval to restructure around $10bn of debt, marking one of the first resolutions of its kind among China's distressed real estate companies.

The plan, which was set out in March this year after Sunac missed interest payments on a US dollar bond in May 2022, was approved by a high court judge yesterday at a hearing in Hong Kong.

Sunac, one of China's largest developers in 2021 before it defaulted, will issue new notes and convertible bonds to creditors as part of its plan.

The case did not clarify the implications for the developer's onshore debt, which are the greater part of its overall Rmb1tn ($138bn) in liabilities.

The company's Hong Kong-listed shares jumped 6.3 per cent yesterday.

The breakthrough comes at a time of continued distress for China's property sector, which typically drives more than a quarter of economic activity in the country but has been weighed down by developer defaults.

Missed interest payments in 2021 by heavily indebted developer Evergrande sparked a liquidity crisis in the sector.

Evergrande's restructuring plan was derailed last week after the company said it could no longer issue "new notes" because it was "being investigated".

> 'These prices suggest the market holds little hope in the recovery prospects for offshore bondholders'

This was an apparent reference to a China Securities Regulatory Commission inquiry into a suspected breach of information disclosure rules.

People familiar with the discussions said they had been told the company's application to China's securities regulator to issue new notes had been rejected, without providing further details.

Evergrande last week said its chair had been placed under "mandatory measures" due to suspicion of "crimes". Police have also detained some staff at its wealth management unit.

China's drive to reduce leverage in the property sector in 2020 increased funding pressure on heavily indebted developers but has recently taken steps to ease its approach.

Country Garden, a developer that was previously seen as safer than its peers, came close to missing interest payments over the summer.

Chinese policymakers have largely emphasised the need to complete unfinished construction projects in a bid to increase confidence at a time when consumer spending is weak.

The "vast majority" of Chinese developer dollar bonds are now trading below 10 cents on the dollar, according to an analysis from CreditSights published yesterday. "Clearly these prices suggest the market holds very little hope in the recovery prospects for offshore bondholders," analysts noted.

Financials

China jitters turn private equity investors to south and south-east Asia

ECHO WONG
NIKKEI ASIA STAFF WRITER

Investors disappointed by China's slow recovery and lack of new growth drivers are turning to India and south-east Asia for deals — even as experts warn that they face a steep learning curve and potentially limited choice of exit routes in many of these markets.

India and Indonesia have become two of the most popular destinations for private equity investors, who are under pressure as high interest rates drive up funding costs and as backers, such as family offices and university endowments, become increasingly nervous about investing in China.

There have not been "major shifts" in investor sentiment towards China in the past six months, according to one Hong Kong-based investment banker, but there has been "a higher bar for China investments".

He said clients were now looking for deals in India and Indonesia that offered "similar growth characteristics to what China had 10 years ago".

Healthcare in China has been a relatively resilient sector thanks to its ability to address an ageing population and because cross-border deals in the segment face less geopolitical scrutiny. But even here, the country is losing its lead.

In terms of fundraising volume, India overtook China as the largest market for Asia-Pacific healthcare buyout deals in 2022, according to Bain & Co data that goes back to 2012.

For the first half of this year, China saw $1.9bn in such buyout deals compared with $3.1bn in India.

Many south-east Asian companies thinking about a China angle during the pandemic are now focusing on their home markets, said Vikram Kapur, Singapore-based head of Asia-Pacific healthcare and life sciences for Bain.

Indonesia has gained in popularity among growth-focused investors

Even China investors are trying to diversify by joining — and driving up — the competition for south-east Asian deals, investment bankers and deal advisers say.

But allocating capital to south-east Asia can be challenging, especially for newcomers. The fragmented landscape means applying the China investment model and expecting companies to be able to scale up quickly may not work, experts said.

A less mature capital market compared with China means fewer transactions and smaller deals, putting added pressure on deal-sourcing capabilities to justify resources.

It's "incredibly difficult" for investors to write an equity cheque up to several hundred million dollars in any single south-east Asian country, which is often a reflection of smaller economic scale compared with China, said Xuong Liu, a Hong Kong-based managing director at consultancy Alvarez & Marsal.

His company is working on healthcare deals in Indonesia as well as precision engineering in Malaysia.

For investors who have been predominantly focused on China, entering markets where they don't have a record is particularly challenging, and often means paying a higher price just to build up their credibility in the local market, said Andrew Huntley, a managing partner at BDA Partners, a global investment banking advisory group focused on Asia.

Sourcing proprietary deals in south-east Asia without having a local team in place is another hurdle, he added.

Then there are differing business practices and norms from country to country. Doing due diligence in Vietnam, for example, is particularly difficult, legal experts said.

It is not unusual to encounter companies with "selective record-keeping" that make it hard for private equity investors to get a complete picture of their business, said Steven Tran, a Singapore-based partner at law firm Morrison Foerster.

"The situation is also not helped by the fact that the overall business environment in Vietnam tends to be less transparent than many foreign investors might be used to," Tran said.

Private equity firm Silverhorn, which favours Indonesia's financial technology and ecommerce sectors, has sent executives to visit the market "multiple times" this year, according to Marco Klaus, the firm's Hong Kong-based chief investment officer.

"We have seen some capital movement from the original allocation of China shifting over to Indonesia," Klaus said.

Silverhorn has reduced its China investment from a high of 80 per cent a few years ago to 50 per cent.

Singapore, Indonesia, Vietnam and the Philippines together account for about 30 per cent of the company's investments with 5 per cent in India and 15 per cent in the US

A less mature private market system in Indonesia means buyout opportunities are still fairly limited, Klaus said.

Indonesia is the world's sixth-largest market for initial public offerings by amount raised this year but most of the money has gone to companies in the domestic energy and mining sectors, suggesting a public listing may be less of an exit option for early-stage investors in emerging industries, according to a Hong Kong-based banker specialising in technology and consumer deals in Indonesia.

Some of the ecommerce investment themes popular during the lockdowns of the Covid-19 pandemic have also lost steam as many locals still prefer to shop offline, the banker added.

Next year's presidential election in Indonesia is also pushing investors to be cautious about making commitments, he said.

Then there is the geopolitical shadow hanging over investments in Asia, whether they are in China or not.

Washington has restricted US private investment into China in areas such as artificial intelligence but extra due diligence may be required for any investment around the world since the target company may involve a Chinese person who could make the deal subject to US investment restrictions, according to Eric Jiang, a Beijing-based partner at Chinese law firm Jingtian & Gongcheng.

"Regulations require compliance and that increases costs," he said.

Some argue that Asia's biggest economy remains a long-term investment opportunity but, for now, caution seems to be the prevailing sentiment.

"We're not seeing people right now jump headfirst [into China deals]," said Kapur.

A version of this article was first published by Nikkei Asia on September 28

America is now less likely to avoid an economic recession

Mohamed El-Erian

Markets Insight

An intense period of rising interest rates, high oil prices and a stronger dollar is pushing the financial market consensus on US economic growth away from the comforting notion of a soft landing.

By my count, this will be the sixth time in the past 15 months that conventional wisdom shifts for the world's most influential economy.

It's a pivot that, unfortunately, is likely to stick for longer this time around, threatening what has been an impressively strong US economy, undermining genuine financial stability and exporting volatility to the rest of the world.

In just the last two weeks, the yield on the benchmark US 10-year bond has risen by some 0.5 percentage points to around 4.8 per cent in a comprehensive shift of the entire interest rate structure.

The move brought the change in yields to an eye-popping 1 percentage point since the end of June, leading to higher borrowing rates for companies, more burdensome car loans for households, and more pronounced and uneven deposit outflows from the banking system as investors shift cash into money market accounts.

Notably, the cost of a 30-year mortgage is set to top 8 per cent, making already expensive home purchases even less affordable.

The international spillovers from this shift include more costly and less reliable financing and, for Japan, a more complicated exit from an increasingly unsustainable monetary policy regime with knock-on effects for the US.

Pushing yields up in an increasingly disorderly manner is the combination of markets recognising that higher policy rates set by the US Federal Reserve will be here for a while and the need to absorb a significant supply of Treasury bonds due to large budgetary deficits.

Adding fuel to this fire are high prices for oil amid solid demand, continued production cuts by Opec+ and heavily depleted inventories. There is a material risk of this leading to higher inflation for a broader range of goods and services.

These are developments that the economy and markets do not enjoy. They damp growth and increase the threat of stagflation.

Financial stability risks are raised with interest rate mismatches within certain banks, the refinancing needs of other financial sector participants and the risk of credit dislocations.

> The turn in US economic surprises will not be pleasant domestically or for the rest of the world

While markets are adjusting fast to higher rates, that of the real economy is at a much earlier phase — with now a much bumpier road ahead.

For well over a year now, I have argued that the US is able to avoid the 2023 recession that many were repeatedly calling. I am now less confident about what's in store for 2024 given how the recent surge in rates compounds the erosion in financial, human and institutional resilience.

My confidence is also shaken by a Fed that is yet to realise that its forward policy guidance — as well as its monetary policy framework and the way officials communicate the appropriate inflation target — need to be rapidly adapted to the reality of a changed economic paradigm.

Indeed, the world's most influential central bank has yet to sufficiently embrace the fundamental change in the basic characterisation of the economy from a world of insufficient demand to one in which the supply sector is a lot less flexible for several years.

The longer the Fed takes to adjust, the greater the risk to economic wellbeing.

Last year was about markets adjusting to central banks playing catch-up with adverse inflation realities. This year is about markets internalising the significant likelihood that rates will stay higher for longer, adding to the contractionary impetus in the pipeline.

After all, as a Fed governor rightly said last week, "the most important question at this point is not whether an additional rate increase is needed this year or not, but rather how long we will need to hold rates at a sufficiently restrictive level to achieve our goals".

At a town hall meeting at the end of September, Fed chair Jay Powell stated: "When my colleagues and I publish our projections for the most likely path for the economy and interest rates, as we did a couple of weeks ago, one of our goals is to influence spending and investment decisions today and in the months ahead."

If congressional dysfunction spreads further and if the Fed continues to drag its feet on changing key underpinnings of its policy formulation, the turn in US economic surprises will not be pleasant for either the domestic economy or the rest of the world.

Mohamed El-Erian is president of Queens' College, Cambridge, and is an adviser to Allianz and Gramercy

The day in the markets

What you need to know

- **Treasury yields steady ahead of US jobs data**
- **Wall Street dragged lower by utilities and energy sectors**
- **Brent crude extends losses on global growth worries**

Tech-heavy Nasdaq declines as US bond yields surge
Nasdaq Composite index

Source: LSEG

Treasury yields steadied and Wall Street stocks slipped yesterday as investors turned to US jobs market data for signs of the economy's performance in the face of higher interest rates.

Wall Street's benchmark S&P 500 shed 0.7 per cent by midday in New York, dragged lower by utilities and energy stocks, while the tech-heavy Nasdaq Composite lost 0.5 per cent.

Both indices had pushed higher during the previous session.

Long-dated US government debt sold off slightly after labour department figures showed fewer than expected new claims for unemployment support at the end of September — the ninth consecutive week that official figures have undershot economists' forecasts.

The yield on 30-year Treasuries rose 1 basis point to 4.89 per cent while the 10-year yield fell 1bp to 4.72 per cent.

Longer-term Treasury yields earlier this week rose to their highest levels in more than a decade, pushed up by the US Federal Reserve's mid-September warning that rates are likely to remain "higher for longer" to tackle inflation.

Bond prices steadied after data on Wednesday showed a slowdown in hiring growth but analysts said today's crucial non-farm payrolls report would dictate whether the bond market sell-off restarts.

A higher than expected reading would put pressure on the Fed to keep rates high to push inflation down towards the central bank's target of 2 per cent.

"The Fed gets worried if something breaks, only then," Jim Caron, a portfolio manager at Morgan Stanley Investment Management, said. "Unemployment is still low and we are still above target inflation. Unless something breaks, higher yields are part of the solution, not the problem."

Analysts at Danske Bank said the combination of higher bond yields, falling equities and a strengthening dollar had the potential to curb economic growth.

"The collapse of Silicon Valley Bank and Credit Suisse provides a case in point on how a sudden negative shock to the outlook following rapid tightening in financial conditions could sharply weigh on rate expectations," the bank added.

Crude oil prices resumed their slide after recording their biggest daily decline in more than a year in the previous session.

Brent crude, the international oil benchmark, fell 1.8 per cent to $85.64 per barrel after dropping 5 per cent on Wednesday as investors worried that an extended period of high interest rates will dent global growth. **George Steer**

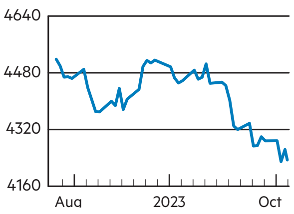
Markets update

	US	Eurozone	Japan	UK	China	Brazil
Stocks	**S&P 500**	**Eurofirst 300**	**Nikkei 225**	**FTSE100**	**Shanghai Comp**	**Bovespa**
Level	4234.11	1750.83	31075.36	7451.54	3110.48	113021.56
% change on day	-0.70	0.23	1.80	0.53	0.10	-0.52
Currency	**$ index (DXY)**	**$ per €**	**Yen per $**	**$ per £**	**Rmb per $**	**Real per $**
Level	106.698	1.053	148.605	1.216	7.304	5.176
% change on day	-0.095	0.381	-0.235	0.330	0.000	0.236
Govt. bonds	**10-year Treasury**	**10-year Bund**	**10-year JGB**	**10-year Gilt**	**10-year bond**	**10-year bond**
Yield	4.710	2.876	0.800	4.695	2.687	11.614
Basis point change on day	-3.840	-4.100	-0.300	-3.200	0.000	4.300
World index, Commods	**FTSE All-World**	**Oil - Brent**	**Oil - WTI**	**Gold**	**Silver**	**Metals (LMEX)**
Level	425.74	84.16	82.57	1818.95	21.11	3572.60
% change on day	-0.14	-1.92	-1.96	-0.19	0.24	-0.83

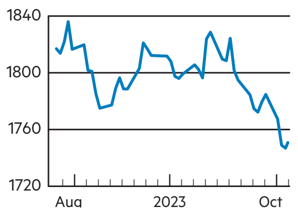
Yesterday's close apart from: Currencies = 16:00 GMT; S&P, Bovespa, All World, Oil = 17:00 GMT; Gold, Silver = London pm fix. Bond data supplied by Tullett Prebon.

Main equity markets

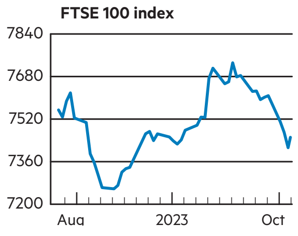
S&P 500 index



Eurofirst 300 index



FTSE 100 index



Biggest movers

%	US		Eurozone		UK	
Ups	Lamb Weston Holdings	9.35	Saipem	4.13	Imperial Brands	3.92
	Eqt	3.39	Grifols	2.97	Tesco	3.58
	Marketaxess Holdings	1.93	Casino Guichard	2.84	Int Consolidated Airlines S.a.	2.55
	Nrg Energy	1.71	A.p. Moller - Maersk B	1.92	Frasers	2.29
	Oneok	1.57	Accor	1.82	Centrica	2.17
Downs	Clorox	-8.21	Alstom	-37.84	Jd Sports Fashion	-2.98
	Dexcom	-7.02	Acs Const.	-3.99	Anglo American	-1.54
	Aes	-5.76	Adidas	-2.97	Fresnillo	-1.42
	Solaredge	-5.58	Telecom Italia	-2.69	Weir	-1.11
	Molson Coors Beverage	-4.66	Asml Holding	-1.88	Barclays	-0.88

Prices taken at 17:00 GMT. Based on the constituents of the FTSE Eurofirst 300 Eurozone.

All data provided by Morningstar unless otherwise noted.

Wall Street

Rallying to the top of the S&P 500 index was **Lamb Weston**, the frozen potato producer, which posted earnings of $1.63 per share — more than 50 per cent ahead of Wall Street estimates.

The company that counts McDonald's among its customers said it was benefiting from price rises initiated last year and a decision to exit some "lower priced and lower margin business".

Solid demand alongside a forecast for decent crops in North America and Europe prompted an upgrade to its full-year outlook with Lamb Weston now anticipating net income of $800mn to $870mn, up from a previous estimate of $725mn to $790mn.

At the bottom of the blue-chip benchmark was **Clorox**, which detailed the damage wrought by a cyber attack disclosed in August.

The manufacturer of cleaning products said it expected to post a loss for its fiscal first quarter owing to an attack that "caused widescale disruption . . . including order processing delays and significant product outages".

Electric-vehicle maker **Rivian** fell sharply on plans to issue $1.5bn in convertible notes.

Owners of such notes have the option of converting the debt into equity in the future, therefore diluting the holdings of existing shareholders. *Ray Douglas*

Europe

French train company **Alstom** tumbled after it anticipated negative free cash flow of as much as €750mn for its fiscal year against a previous forecast of "significantly positive" cash generation stated in July.

This weakness was the result of a delay to a UK train programme, a production ramp-up to address backlogs, and a slide in the level of downpayments, the group said.

Deutsche Bank said the news was "a major blow to management's credibility", with the broker expecting Alstom to end its financial year with a net debt of €3bn — €1bn higher than expected.

Denmark's **Pandora** jumped after the world's largest jewellery brand forecast a compound annual growth rate of 7 to 9 per cent between 2023 and 2026, ahead of a consensus estimate of 4 to 5 per cent, noted Jefferies.

This projection was part of an update that went "beyond market expectations", said the broker.

It would probably lead to a 15 per cent boost to analysts' 2025 estimates for the group.

Italian industrial company **Maire** rallied on announcing its largest ever contract award, having won a $8.7bn deal linked to Abu Dhabi National Oil Company's Hail and Ghasha liquefied natural gas project. *Ray Douglas*

London

Heading the FTSE 100 index was tobacco group **Imperial Brands**, which announced a share buyback of up to £1.1bn that would run until the end of September 2024.

This was 10 per cent higher than last year's repurchases. It formed part of a "multiyear buyback programme", said Imperial, suggesting investors should expect further returns through repurchases and dividends.

Topping the FTSE 250 mid-cap index was ventilation specialist **Volution**, which posted an adjusted pre-tax profit of £65.1mn for its fiscal year, modestly ahead of the £62mn analysts had expected.

Jefferies learned from an analyst meeting that the public refurbishment, maintenance and improvement market was "the standout area of growth" for Volution.

Moreover, "as we move into the winter months, when damp and condensation become more of an issue", demand in this area would likely pick up, said the broker.

Challenger bank **Metro** was among the session's biggest fallers following reports that it was seeking to raise millions to shore up its balance sheet.

In reply to "press speculation", the lender said it was "evaluating . . . a range of options, including a combination of equity issuance, debt issuance and/or refinancing and asset sales". *Ray Douglas*

MARKET DATA

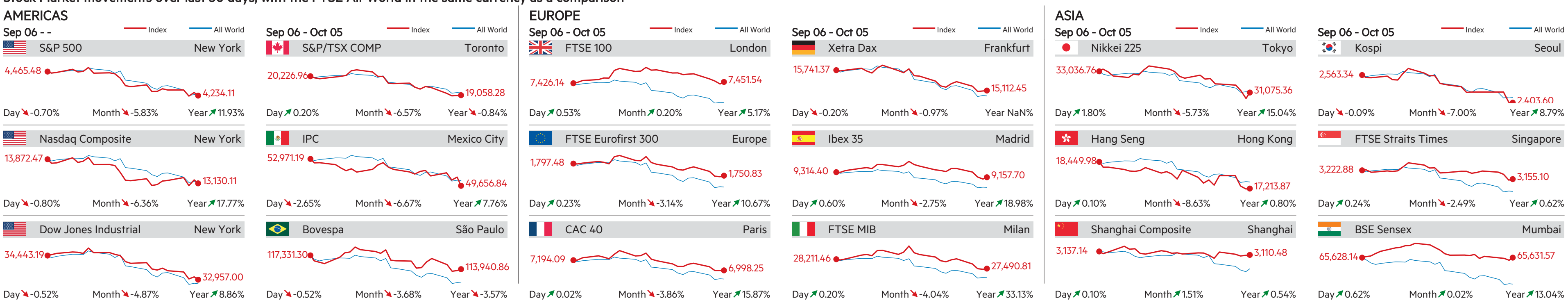
WORLD MARKETS AT A GLANCE

FT.COM/MARKETSDATA

Change during previous day's trading (%)

S&P 500	Nasdaq Composite	Dow Jones Ind	FTSE 100	FTSE Eurofirst 300	Nikkei	Hang Seng	FTSE All World $	$ per €	$ per £	¥ per $	£ per €	Oil Brent $ Sep	Gold $
-0.70%	-0.80%	-0.52%	0.53%	0.23%	1.80%	0.10%	-0.14%	0.381%	0.330%	-0.235%	No change	-0.42%	-0.19%

Stock Market movements over last 30 days, with the FTSE All-World in the same currency as a comparison



Country	Index	Latest	Previous
Argentina	Merval	609453.09	593739.90
Australia	All Ordinaries	7117.50	7082.20
	S&P/ASX 200	6925.50	6890.20
	S&P/ASX 200 Res	5695.10	5719.90
Austria	ATX	3091.42	3080.60
Belgium	BEL 20	3467.93	3453.94
	BEL Mid	9690.09	9547.05
Brazil	IBovespa	113021.56	113607.45
Canada	S&P/TSX 60	1145.40	1142.90
	S&P/TSX Comp	19073.42	19034.81
	S&P/TSX Div Met & Min	1673.29	1691.84
Chile	S&P/CLX IGPA Gen	28679.13	28952.58
China	FTSE A200	9684.60	9718.42
	FTSE B35	9000.71	8988.96
	Shanghai A	3261.13	3257.81
	Shanghai B	236.22	236.78
	Shanghai Comp	3110.48	3107.32
	Shenzhen A	1998.36	1989.65
	Shenzhen B	1113.99	1116.90
Colombia	COLCAP	1261.61	1260.21
Croatia	CROBEX	2013.05	2011.29
Cyprus	CSE M&P Gen	68.46	68.68
Czech Republic	PX	1325.82	1333.32
Denmark	OMXC Copenahgen 20	2088.60	2074.61
Egypt	EGX 30	19706.96	19901.24
Estonia	OMX Tallinn	1842.91	1847.37
Finland	OMX Helsinki General	9280.92	9285.44
France	CAC 40	6998.25	6996.73
	SBF 120	5316.33	5314.77
Germany	M-DAX	25172.95	25281.13
	TecDAX	2977.06	2983.30
	XETRA Dax	15070.22	15099.92
Greece	Athens Gen	1154.02	1170.13
	FTSE/ASE 20	2808.06	2840.16
Hong Kong	Hang Seng	17213.87	17195.84
	HS China Enterprise	5887.98	5882.68
	HSCC Red Chip	3421.36	3411.48
Hungary	Bux	55488.58	55961.13
India	BSE Sensex	65631.57	65226.04
	Nifty 500	17195.80	17123.10
Indonesia	Jakarta Comp	6874.83	6886.58
Ireland	ISEQ Overall	8262.40	8222.41
Israel	Tel Aviv 125	1864.80	1886.56
Italy	FTSE Italia All-Share	29320.68	29268.12
	FTSE Italia Mid Cap	38871.41	38875.24
	FTSE MIB	27490.81	27435.59
Japan	2nd Section	7228.27	7239.06
	Nikkei 225	31075.36	30526.88
	S&P Topix 150	1967.44	1927.81
	Topix	2263.76	2218.89
Jordan	Amman SE	2408.69	2397.75
Kenya	NSE 20	1505.47	1511.65
Kuwait	KSX Market Index	6633.44	6603.51
Latvia	OMX Riga	1362.35	1354.67
Lithuania	OMX Vilnius	935.70	938.68
Luxembourg	LuxX	1375.60	1373.13
Malaysia	FTSE Bursa KLCI	1415.60	1415.84
Mexico	IPC	49389.49	50732.69
Morocco	MASI	11660.21	11715.45
Netherlands	AEX	721.75	720.86
	AEX All Share	971.76	971.75
New Zealand	NZX 50	11309.10	11235.05
Nigeria	SE All Share	66482.28	66770.97
Norway	Oslo All Share	1017.37	1006.88
Pakistan	KSE 100	47452.38	47079.83
Philippines	Manila Comp	6178.60	6298.20
Poland	Wig	63853.59	64282.18
Portugal	PSI 20	5863.42	5824.40
	PSI General	4116.69	4085.45
Romania	BET Index	14040.13	14128.40
Russia	Micex Index	2436.57	2445.30
	RTX	1245.71	1212.57
Saudi-Arabia	TADAWUL All Share Index	10952.34	11005.94
Singapore	FTSE Straits Times	3155.10	3147.39
Slovakia	SAX	330.79	330.26
Slovenia	SBI TOP	-	-
South Africa	FTSE/JSE All Share	71249.59	70564.69
	FTSE/JSE Res 20	54900.04	54658.63
	FTSE/JSE Top 40	65546.19	64882.30
South Korea	Kospi	2403.60	2405.69
	Kospi 200	318.58	319.45
Spain	IBEX 35	9157.70	9102.90
Sri Lanka	CSE All Share	11042.95	11080.79
Sweden	OMX Stockholm 30	2127.06	2116.77
	OMX Stockholm AS	783.97	778.33
Switzerland	SMI Index	10783.15	10756.19
Taiwan	Weighted Pr	16915.54	16942.30
Thailand	Bangkok SET	1452.55	1453.07
Turkey	BIST 100	8378.03	8333.14
UAE	Abu Dhabi General Index	9222.93	9251.11
UK	FT 30	2588.20	2568.70
	FTSE 100	7451.54	7412.45
	FTSE 4Good UK	6728.53	6692.31
	FTSE All Share	4031.93	4010.91
	FTSE techMARK 100	5929.83	5927.81
USA	DJ Composite	10880.57	10957.93
	DJ Industrial	32957.00	33129.55
	DJ Transport	14597.51	14724.89
	DJ Utilities	783.90	794.08
	Nasdaq 100	14632.67	14776.25
	Nasdaq Cmp	13130.11	13236.01
	NYSE Comp	14999.33	15070.91
	S&P 500	4234.11	4263.75
	Wilshire 5000	42053.18	41446.59
Venezuela	IBC	44909.54	44591.51
Vietnam	VNI	1113.89	1128.67
Cross-Border	DJ Global Titans ($)	494.73	496.65
	Euro Stoxx 50 (Eur)	4101.05	4099.85
	Euronext 100 ID	1295.87	1294.31
	FTSE 4Good Global ($)	10785.32	10790.59
	FTSE All World ($)	425.74	426.35
	FTSE E300	1750.83	1746.84
	FTSE Eurotop 100	3505.94	3497.77
	FTSE Global 100 ($)	2907.02	2917.19
	FTSE Gold Min ($)	1512.48	1516.19
	FTSE Latibex Top (Eur)	4440.00	4432.20
	FTSE Multinationals ($)	2966.14	2950.17
	FTSE World ($)	777.00	778.17
	FTSEurofirst 100 (Eur)	4713.07	4704.39
	FTSEurofirst 80 (Eur)	5556.70	5555.66
	MSCI ACWI Fr ($)	646.27	644.80
	MSCI All World ($)	2810.86	2799.64
	MSCI Europe (Eur)	1781.05	1783.83
	MSCI Pacific ($)	2591.76	2639.95
	S&P Euro (Eur)	1808.39	1808.61
	S&P Europe 350 (Eur)	1797.58	1792.98
	S&P Global 1200 ($)	3089.09	3096.03
	Stoxx 50 (Eur)	3859.80	3850.66

(c) Closed. (u) Unavaliable. † Correction. ♥ Subject to official recalculation. For more index coverage please see www.ft.com/worldindices. A fuller version of this table is available on the ft.com research data archive.

STOCK MARKET: BIGGEST MOVERS

AMERICA

ACTIVE STOCKS	stock traded m's	close price	Day's change
Tesla	170.4	258.78	-2.38
Nvidia	85.4	443.20	2.79
Apple	33.0	173.49	-0.18
Meta Platforms	29.7	300.79	-4.79
Advanced Micro Devices	27.7	101.54	-2.53
Amazon.com	20.9	125.04	-1.96
Microsoft	19.8	316.58	-2.38
Alphabet	10.3	134.80	-0.44
Exxon Mobil	9.8	109.15	-2.35
Alphabet	8.3	135.72	-0.55

BIGGEST MOVERS	Close price	Day's change	Day's chng%
Ups			
Lamb Weston Holdings	98.95	8.46	9.35
Eqt	41.00	1.35	3.39
Marketaxess Holdings	217.40	4.12	1.93
Nrg Energy	38.10	0.64	1.71
Oneok	62.32	0.97	1.57
Downs			
Clorox	121.01	-10.82	-8.21
Dexcom	81.55	-6.16	-7.02
Aes	12.44	-0.76	-5.76
Solaredge	118.32	-6.99	-5.58
Molson Coors Beverage	60.09	-2.94	-4.66

Based on the constituents of the S&P500

LONDON

ACTIVE STOCKS	stock traded m's	close price	Day's change
Shell	198.6	2532.50	11.00
Bp	130.3	499.05	-0.40
British American Tobacco	123.9	2508.50	45.00
Hsbc Holdings	115.0	644.50	4.00
Astrazeneca	109.0	10902.00	10.00
Relx	95.1	2852.00	34.00
Unilever	92.8	4030.50	18.00
Diageo	91.5	3055.50	22.00
Rio Tinto	79.2	4957.50	26.00
Glencore	78.7	439.85	-3.45

BIGGEST MOVERS	Close price	Day's change	Day's chng%
Ups			
Volution	365.00	28.40	8.44
Int Distributions Services	258.60	17.00	7.04
Diversified Energy	71.65	4.55	6.78
Ferrexpo	75.60	4.55	6.40
Apax Global Alpha	166.00	9.40	6.00
Downs			
Aston Martin Lagonda Global Holdings	244.40	-20.00	-7.56
Oxford Instruments	1976.00	-79.00	-3.84
Jupiter Fund Management	87.35	-3.35	-3.69
Hays	102.40	-3.50	-3.31
Bank Of Georgia	3405.00	-110.00	-3.13

Based on the constituents of the FTSE 350 index

EURO MARKETS

ACTIVE STOCKS	stock traded m's	close price	Day's change
Roche Gs	373.9	256.30	2.86
Novartis N	331.3	90.62	-0.38
Nestle N	308.4	106.90	0.06
Totalenergies	165.3	59.83	-0.26
Asml Holding	161.4	547.00	-10.50
Eni	141.4	14.44	-0.06
Intesa Sanpaolo	138.7	2.36	0.00
Unicredit	138.4	21.83	0.29
Lvmh	126.2	720.10	7.60
Richemont N	112.9	115.99	1.25

BIGGEST MOVERS	Close price	Day's change	Day's chng%
Ups			
A.p. M__ller - M__rsk A A/s	1712.39	36.21	2.16
Orsted A/s Dk 10	6.11	0.12	1.95
A.p. M__ller - M__rsk B A/s	1741.22	32.85	1.92
Henkel Ag+co.kgaa Vzo	68.26	1.24	1.85
Dsv A/s	173.59	3.15	1.85
Downs			
Asml Holding	547.00	-10.50	-1.88
Volkswagen Ag St O.n.	119.55	-1.80	-1.48
Holcim N	58.20	-0.77	-1.30
Neste	29.94	-0.34	-1.12
Siemens Ag Na O.n.	132.20	-1.34	-1.00

Based on the constituents of the FTSEurofirst 300 Eurozone index

TOKYO

ACTIVE STOCKS	stock traded m's	close price	Day's change
Mitsubishi Ufj Fin	1222.8	1255.00	48.50
Toyota Motor	1073.9	2590.00	112.50
Kawasaki Kisen Kaisha,	619.6	5228.00	185.00
Japan Tobacco	610.0	3239.00	-33.00
Tokyo Electron	597.2	19755.00	395.00
Mitsubishi	575.0	6779.00	95.00
Sumitomo Mitsui Fin	568.5	7318.00	247.00
Softbank .	520.4	6082.00	8.00
Fast Retailing Co.,	450.5	31750.00	390.00
Inpex	440.3	1963.00	-35.00

BIGGEST MOVERS	Close price	Day's change	Day's chng%
Ups			
Japan Exchange	2858.00	173.00	6.44
Aozora Bank,	2931.00	159.00	5.74
Yamaha Motor Co.,	3752.00	184.00	5.16
Advantest	4240.00	206.00	5.11
Nippon Paper Industries Co Ltd	1323.00	64.00	5.08
Downs			
Taiyo Yuden Co.,	3715.00	-248.00	-6.26
Mitsui E&s Co.	490.00	-15.00	-2.97
Pacific Metals Co.,	1225.00	-26.00	-2.08
Inpex	1963.00	-35.00	-1.75
Jgc	1831.00	-28.00	-1.51

Based on the constituents of the Nikkei 225 index

UK MARKET WINNERS AND LOSERS

FTSE 100	Oct 05 price(p)	%Chg week	%Chg ytd
Winners			
Tesco	280.40	6.0	25.2
Int Consolidated Airlines S.a.	155.10	5.0	25.1
Rightmove	570.20	3.5	11.5
Relx	2852.00	3.2	24.6
Sainsbury (j)	256.40	2.4	17.8
United Utilities	933.20	2.4	-5.8
Intertek	4124.00	2.1	2.1
Severn Trent	2308.00	1.9	-
Compass	2043.00	1.8	6.7
Land Securities	585.40	1.8	-5.7
Experian	2719.00	1.8	-3.3
Auto Trader	622.20	1.7	20.7
Losers			
Bp	499.05	-7.8	5.1
Anglo American	2108.50	-7.0	-
Fresnillo	513.00	-6.2	-
Melrose Industries	447.40	-5.8	11.8
Ashtead	4779.00	-5.6	1.3
Sse	1514.50	-5.5	-11.7
Legal & General	210.40	-5.1	-
Natwest	222.50	-5.1	-
Rolls-royce Holdings	210.50	-5.0	-
Smith & Nephew	965.20	-5.0	-
Endeavour Mining	1498.00	-4.9	-
Airtel Africa	119.60	-4.9	7.2

FTSE 250	Oct 05 price(p)	%Chg week	%Chg ytd
Winners			
Future	848.50	18.8	-
Digital 9 Infrastructure	39.55	18.1	-54.2
Syncona	122.00	14.9	-
Pennon	610.00	10.7	-31.4
Ascential	217.60	10.0	7.7
Essentra	167.40	5.5	-
Big Yellow	958.00	4.9	-
Easyjet	438.30	4.8	34.8
Grainger	238.20	4.0	-5.8
W.a.g Payment Solutions	96.00	3.9	20.9
Genus	2110.00	3.8	-
Safestore Holdings	742.00	3.8	-
Losers			
Spirent Communications	93.80	-30.7	-
Ceres Power Holdings	284.80	-12.9	-
Cab Payments Holdings	205.50	-12.0	-
Diversified Energy	71.65	-11.6	-
Vistry	789.50	-11.5	26.5
Sdcl Energy Efficiency Income Trust	61.70	-11.2	-
Octopus Renewables Infrastructure Trust	80.40	-11.2	-19.6
Playtech	405.00	-10.8	-
Energean	1035.00	-10.6	-20.7
Foresight Holdings	398.00	-10.4	-7.9
Ithaca Energy	165.20	-10.0	-
Harbour Energy	236.70	-9.4	-

FTSE SmallCap	Oct 05 price(p)	%Chg week	%Chg ytd
Winners			
Superdry	50.50	17.6	-
Trustpilot	109.20	11.8	13.6
Videndum	318.50	6.3	-
Schroder Real Estate Investment Trust	42.55	5.1	-1.4
The Gym	115.80	4.3	5.9
Abrdn Eur Logistics Income	63.10	4.3	-7.7
Hollywood Bowl	247.50	4.0	-0.6
Renewi	730.00	3.4	21.6
Residential Secure Income	61.00	3.4	-
Pantheon Infrastructure	80.00	3.4	-
Ocean Wilsons (holdings) Ld	990.00	3.2	6.5
Kin And Carta	81.00	3.2	-
Losers			
Xp Power	809.00	-65.8	-
Metro Bank Holdings	37.50	-36.1	-
Alfa Fin Software Holdings	159.50	-13.1	-3.9
Enquest	13.90	-10.7	-36.7
Gore Street Energy Storage Fund	70.40	-10.7	-
Seraphim Space Investment Trust	40.20	-10.3	-
Treatt	465.00	-9.4	-26.2
Pod Point Holdings	26.80	-9.2	-
Tullow Oil	31.28	-9.0	-
Odyssean Investment Trust	142.00	-8.7	-18.5
Ct Private Equity Trust	434.00	-8.6	2.6
Saga	110.80	-8.6	-

Industry Sectors	Oct 05 price(p)	%Chg week	%Chg ytd
Winners			
Real Estate & Investment Servic	2175.05	2.2	2.7
General Retailers	3583.96	2.0	6.8
Media	10352.03	1.7	14.0
Food & Drug Retailers	4141.06	0.9	0.6
Real Estate Investment Trusts	1988.12	0.8	-
Beverages	23780.25	0.4	-
Software & Computer Services	2111.56	0.2	19.5
Support Services	9984.02	-0.1	0.5
General Industrials	6104.79	-0.2	0.9
Chemicals	8818.51	-0.5	-
Gas Water & Multiutilities index	5593.11	-0.9	-1.3
Pharmaceuticals & Biotech.	20916.92	-0.9	-0.6
Losers			
Oil & Gas Producers	8666.74	-5.9	6.7
Electricity	9014.14	-5.6	-
Automobiles & Parts	1512.28	-5.3	1.5
Industrial Transportation	3495.11	-5.0	0.9
Mining	8314.93	-5.0	-
Industrial Metals	6227.59	-5.0	-
Aerospace & Defense	7002.40	-4.2	36.5
Health Care Equip.& Services	10502.03	-3.9	-3.4
Household Goods	10394.60	-3.6	4.7
Personal Goods	25723.14	-3.3	-16.2
Nonlife Insurance	3056.24	-3.0	-8.9
Industrial Engineering	13071.33	-3.0	-5.4

Based on last week's performance. †Price at suspension.

CURRENCIES

Oct 5	Currency	DOLLAR Closing Mid	DOLLAR Day's Change	EURO Closing Mid	EURO Day's Change	POUND Closing Mid	POUND Day's Change
Argentina	Argentine Peso	350.0242	-0.0003	368.5940	1.3301	425.6131	1.5414
Australia	Australian Dollar	1.5749	-0.0100	1.6585	-0.0045	1.9150	-0.0052
Bahrain	Bahrainin Dinar	0.3770	-	0.3970	0.0014	0.4584	0.0017
Bolivia	Bolivian Boliviano	6.9100	-	7.2766	0.0263	8.4022	0.0304
Brazil	Brazilian Real	5.1760	0.0122	5.4506	0.0325	6.2938	0.0376
Canada	Canadian Dollar	1.3732	-0.0043	1.4460	0.0007	1.6697	0.0008
Chile	Chilean Peso	920.5700	2.9950	969.4088	6.6415	1119.3702	7.6835
China	Chinese Yuan	7.3040	-	7.6916	0.0278	8.8814	0.0322
Colombia	Colombian Peso	4383.4300	86.9300	4615.9847	107.8737	5330.0472	124.6283
Costa Rica	Costa Rican Colon	535.7300	1.4900	564.1520	3.5996	651.4227	4.1650
Czech Republic	Czech Koruna	23.1760	-0.0944	24.4056	-0.0110	28.1809	-0.0123
Denmark	Danish Krone	7.0817	-0.0258	7.4574	-0.0001	8.6110	0.0000
Egypt	Egyptian Pound	30.7957	0.0179	32.4295	0.1358	37.4461	0.1573
Hong Kong	Hong Kong Dollar	7.8316	0.0014	8.2470	0.0313	9.5228	0.0363
Hungary	Hungarian Forint	367.9788	-1.6187	387.5011	-0.2997	447.4450	-0.3402
India	Indian Rupee	83.2644	0.0238	87.6818	0.3414	101.2456	0.3955
Indonesia	Indonesian Rupiah	15615.0000	-15.0000	16443.4198	43.6055	18987.1134	50.5887
Israel	Israeli Shekel	3.8658	0.0121	4.0708	0.0274	4.7006	0.0317
Japan	Japanese Yen	148.6050	-0.3500	156.4889	0.1976	180.6967	0.2305
..One Month		148.6043	-0.3515	156.4883	0.1965	180.6959	0.2288
..Three Month		148.6028	-0.3546	156.4872	0.1942	180.6941	0.2252
..One Year		148.5967	-0.3668	156.4827	0.1850	180.6959	0.2196
Kenya	Kenyan Shilling	148.7000	0.0500	156.5890	0.6177	180.8123	0.7156
Kuwait	Kuwaiti Dinar	0.3093	-0.0001	0.3257	0.0011	0.3760	0.0012
Malaysia	Malaysian Ringgit	4.7275	-0.0035	4.9783	0.0143	5.7484	0.0166
Mexico	Mexican Peso	18.2115	0.1080	19.1777	0.1825	22.1443	0.2111
New Zealand	New Zealand Dollar	1.6822	-0.0160	1.7715	-0.0104	2.0455	-0.0120
Nigeria	Nigerian Naira	784.5000	9.0000	826.1199	12.4251	953.9154	14.3595
Norway	Norwegian Krone	10.9819	-0.0517	11.5645	-0.0125	13.3535	-0.0143
Pakistan	Pakistani Rupee	283.3500	-1.5250	298.3825	-0.5231	344.5404	-0.5995
Peru	Peruvian Nuevo Sol	3.8277	0.0318	4.0308	0.0479	4.6543	0.0554
Philippines	Philippine Peso	56.6800	-0.0250	59.6870	0.1892	68.9202	0.2194
Poland	Polish Zloty	4.3754	-0.0203	4.6075	-0.0047	5.3203	-0.0054
Romania	Romanian Leu	4.7198	-0.0211	4.9702	-0.0042	5.7391	-0.0048
Russia	Russian Ruble	99.6000	-0.2750	104.8841	0.0900	121.1089	0.1055
Saudi Arabia	Saudi Riyal	3.7506	-	3.9496	0.0143	4.5606	0.0165
Singapore	Singapore Dollar	1.3690	-0.0046	1.4416	0.0004	1.6646	0.0005
South Africa	South African Rand	19.5488	0.1463	20.5859	0.2278	23.7704	0.2633
South Korea	South Korean Won	1350.4500	-13.0000	1422.0952	-8.5075	1642.0844	-9.8015
Sweden	Swedish Krona	11.0176	-0.0908	11.6021	-0.0534	13.3968	-0.0615
Switzerland	Swiss Franc	0.9140	-0.0052	0.9625	-0.0020	1.1114	-0.0023
Taiwan	New Taiwan Dollar	32.2805	-0.1150	33.9931	0.0020	39.2516	0.0029
Thailand	Thai Baht	36.9175	-0.1475	38.8761	-0.0144	44.8900	-0.0161
Tunisia	Tunisian Dinar	3.1796	-0.0094	3.3483	0.0023	3.8662	0.0027
Turkey	Turkish Lira	27.5628	-0.0072	29.0250	0.0972	33.5150	0.1126
United Arab Emirates	UAE Dirham	3.6731	-	3.8679	0.0140	4.4663	0.0162
United Kingdom	Pound Sterling	0.8224	-0.0030	0.8660	0.0000	-	-
..One Month		0.8224	-0.0030	0.8659	0.0000	-	-
..Three Month		0.8225	-0.0030	0.8657	0.0000	-	-
..One Year		0.8225	-0.0030	0.8647	0.0000	-	-
United States	United States Dollar	-	-	1.0531	0.0038	1.2160	0.0044
..One Month		-	-	1.0529	-0.1585	1.2160	0.0044
..Three Month		-	-	1.0526	-0.1585	1.2160	0.0044
..One Year		-	-	1.0512	-0.1585	1.2161	0.0044
Vietnam	Vietnamese Dong	24400.0000	-35.0000	25694.5230	55.9954	29669.2766	65.0846
European Union	Euro	0.9496	-0.0034	-	-	1.1547	0.0000
..One Month		0.9495	-0.0034	-	-	1.1546	0.0000
..Three Month		0.9491	-0.0034	-	-	1.1544	0.0000
..One Year		0.9478	-0.0034	-	-	1.1533	0.0000

Rates are derived from WM Reuters Spot Rates and MorningStar (latest rates at time of production). Some values are rounded. Currency redenominated by 1000. The exchange rates printed in this table are also available at www.FT.com/marketsdata

FTSE ACTUARIES SHARE INDICES

UK SERIES www.ft.com/equities

Produced in conjunction with the Institute and Faculty of Actuaries

	£ Strlg Oct 05	Day's chge%	Euro Index	£ Strlg Oct 04	£ Strlg Oct 03	Year ago	Div yield%	Cover	P/E ratio	X/D adj	Total Return
FTSE 100 (100)	7451.54	0.53	6709.41	7412.45	7470.16	7052.62	3.88	2.01	12.80	252.02	7913.28
FTSE 250 (250)	17599.98	0.61	15847.12	17492.90	17677.76	17562.42	3.90	0.89	28.63	507.78	15058.56
FTSE 250 ex Inv Co (168)	18126.46	0.78	16321.17	17985.49	18171.77	17610.50	4.14	0.86	28.08	544.85	15841.40
FTSE 350 (350)	4074.73	0.54	3668.91	4052.90	4085.97	3884.53	3.88	1.86	13.84	135.10	8579.85
FTSE 350 ex Investment Trusts (265)	4031.12	0.56	3629.64	4008.84	4041.23	3819.41	3.93	1.91	13.30	135.76	4389.09
FTSE 350 Higher Yield (133)	3480.53	0.47	3133.89	3464.39	3505.04	3365.64	5.55	1.85	9.75	155.88	8367.85
FTSE 350 Lower Yield (217)	4257.05	0.62	3833.07	4230.92	4249.11	4001.91	2.09	1.90	25.22	89.67	5351.16
FTSE SmallCap (225)	5892.00	-0.11	5305.19	5898.72	5952.29	5927.39	4.16	-0.18	-131.76	173.11	10205.38
FTSE SmallCap ex Inv Co (117)	4849.81	0.03	4366.80	4848.24	4901.18	4695.87	4.47	-0.10	-229.96	147.87	8743.93
FTSE All-Share (575)	4031.93	0.52	3630.38	4010.91	4043.72	3848.67	3.89	1.81	14.18	133.34	8572.30
FTSE All-Share ex Inv Co (382)	3957.11	0.55	3563.00	3935.48	3967.42	3750.30	3.94	1.88	13.47	133.11	4374.31
FTSE All-Share ex Multinationals (515)	1018.81	0.59	760.72	1012.82	1019.95	998.54	4.40	1.36	16.74	36.43	2247.25
FTSE Fledgling (74)	10201.47	-0.47	9185.47	10249.66	10325.76	11297.13	3.07	0.16	200.06	269.95	22680.27
FTSE Fledgling ex Inv Co (31)	14395.39	-0.87	12961.69	14522.29	14677.09	14167.53	2.58	-1.06	-36.60	382.39	31065.60
FTSE All-Small (299)	4092.98	-0.13	3685.34	4098.40	4135.27	4138.77	4.11	-0.17	-143.86	119.62	9091.08
FTSE All-Small ex Inv Co (148)	3646.58	0.00	3283.41	3646.63	3686.42	3532.90	4.40	-0.12	-192.39	110.64	8324.92
FTSE AIM All-Share (691)	694.74	-0.07	625.55	695.21	703.44	815.44	2.12	1.08	43.42	11.41	828.92
FTSE All-Share Technology (17)	2211.20	0.37	1852.32	2202.95	2188.52	1883.22	1.74	1.56	36.81	32.85	3255.27
FTSE All-Share Telecommunications (6)	1241.80	1.15	1040.26	1227.73	1245.84	1634.66	8.49	1.49	7.89	59.61	1994.51
FTSE All-Share Health Care (12)	14495.80	-0.02	12143.16	14498.44	14520.40	13107.46	2.45	1.38	29.61	319.71	13719.08
FTSE All-Share Financials (257)	4568.36	0.29	3826.93	4555.25	4587.18	4262.09	4.45	2.34	9.59	189.75	5293.49
FTSE All-Share Real Estate (52)	739.59	1.26	648.13	730.40	729.71	768.23	4.93	-2.90	-6.99	29.10	809.78
FTSE All-Share Consumer Discretionary (82)	4947.26	1.12	4144.33	4892.67	4902.55	4165.34	2.48	1.91	21.14	97.22	5350.55
FTSE All-Share Consumer Staples (22)	17726.08	1.19	14849.18	17517.03	17602.40	18925.49	4.47	1.58	14.16	625.75	16869.49
FTSE All-Share Industrials (83)	6723.23	0.49	5632.07	6690.13	6750.06	5834.98	2.29	2.28	19.09	130.05	7938.59
FTSE All-Share Basic Materials (21)	7365.58	-0.37	6170.17	7393.16	7522.97	8310.60	6.34	2.33	6.76	458.77	10648.50
FTSE All-Share Energy (15)	8958.48	0.28	7504.54	8933.17	9164.36	8485.19	4.01	1.63	15.27	275.77	11245.71
FTSE All-Share Utilities (8)	8097.15	1.19	6783.00	8001.99	8012.15	7648.52	5.35	2.00	9.35	339.77	12839.92
FTSE All-Share Software and Computer Services (16)	2395.64	0.38	2006.84	2386.61	2370.80	2036.86	1.72	1.61	36.16	35.00	3730.37
FTSE All-Share Technology Hardware and Equipment (1)	4235.94	0.00	3548.46	4235.94	4235.94	4488.30	3.79	-0.47	-55.58	142.95	5679.68
FTSE All-Share Telecommunications Equipment (1)	209.68	4.11	175.65	201.41	293.06	590.14	6.67	1.51	9.92	13.99	311.03
FTSE All-Share Telecommunications Service Providers (5)	1958.74	1.09	1640.84	1937.67	1949.32	2519.87	8.53	1.49	7.86	93.30	2869.12
FTSE All-Share Health Care Providers (1)	11133.76	0.00	9326.78	11133.76	11184.14	10733.10	0.23	4.26	103.85	43.16	10373.98
FTSE All-Share Medical Equipment and Services (2)	4949.73	-0.32	4146.40	4965.69	4989.22	5150.64	2.93	0.62	54.78	144.86	4912.94
FTSE All-Share Pharmaceuticals and Biotechnology (9)	20848.58	0.00	17464.90	20849.36	20877.56	18698.59	2.43	1.42	28.93	456.10	17766.40
FTSE All-Share Banks (12)	3621.87	0.18	3034.05	3615.37	3641.19	2964.76	5.32	3.75	5.01	190.60	3379.19
FTSE All-Share Finance and Credit Services (8)	10784.83	0.29	9034.48	10754.07	10857.06	10525.57	1.97	1.91	26.66	220.35	14789.62
FTSE All-Share Investment Banking and Brokerage Services (32)	8479.63	0.77	7103.40	8414.46	8451.73	7651.79	5.29	1.87	10.12	373.99	12498.08
FTSE All-Share Closed End Investments (193)	10705.11	0.13	8967.69	10691.16	10789.54	11381.20	3.14	0.39	80.98	257.58	6868.98
FTSE All-Share Life Insurance (6)	5757.99	0.12	4823.48	5751.23	5750.63	6202.90	5.68	0.40	43.62	327.63	7404.60
FTSE All-Share Nonlife Insurance (6)	3463.72	1.73	2901.57	3404.81	3445.66	3384.09	3.01	1.12	29.75	86.97	7559.75
FTSE All-Share Real Estate Investment and Services (10)	2051.72	1.68	1718.73	2017.79	2025.80	1942.80	2.48	0.82	49.21	40.95	6262.45
FTSE All-Share Real Estate Investment Trusts (42)	1805.62	1.17	1512.57	1784.67	1781.23	1909.09	5.42	-3.25	-5.68	78.16	2858.60
FTSE All-Share Automobiles and Parts (3)	1520.03	-2.23	1273.33	1554.70	1548.85	1161.29	1.22	-3.35	-24.55	18.60	1598.07
FTSE All-Share Consumer Services (1)	3367.69	1.59	2821.12	3314.94	3272.90	3023.44	1.82	1.17	46.91	61.00	4351.21
FTSE All-Share Household Goods and Home Construction (11)	8657.71	1.70	7252.58	8512.93	8694.63	7726.54	8.01	1.64	7.62	423.31	8154.54
FTSE All-Share Leisure Goods (2)	27063.89	1.28	22671.48	26721.17	27185.05	16200.17	4.40	1.01	22.51	1143.78	31547.46
FTSE All-Share Personal Goods (4)	22071.95	0.96	18489.73	21862.77	21987.20	25518.17	2.95	2.23	15.24	496.10	17702.43
FTSE All-Share Media (10)	10614.62	1.08	8891.89	10501.60	10384.42	8937.46	2.48	1.93	20.87	234.25	7640.47
FTSE All-Share Retailers (22)	2211.54	0.64	1852.61	2197.48	2238.12	1615.98	2.57	3.09	12.59	38.13	2939.17
FTSE All-Share Travel and Leisure (29)	6652.91	1.12	5573.16	6578.96	6636.64	5520.07	0.83	1.85	64.84	50.90	6930.87
FTSE All-Share Beverages (5)	23881.66	0.66	20005.72	23724.00	23604.35	28767.79	2.67	2.03	18.46	620.51	19612.92
FTSE All-Share Food Producers (8)	6606.82	0.41	5534.55	6579.56	6673.01	5105.58	2.39	2.21	18.92	88.02	6520.46
FTSE All-Share Tobacco (2)	27459.76	2.26	23003.11	26852.84	27387.07	35015.83	8.98	1.63	6.85	1826.19	27773.86
FTSE All-Share Construction and Materials (15)	8609.63	0.78	7212.31	8542.84	8623.15	6782.61	4.08	2.45	10.03	218.42	10779.99
FTSE All-Share Aerospace and Defense (8)	7325.86	0.27	6136.89	7306.24	7475.75	5005.63	1.66	3.98	15.12	81.98	9044.30
FTSE All-Share Electronic and Electrical Equipment (11)	10109.33	-0.15	8468.61	10124.36	10173.13	9799.34	1.83	2.38	22.94	150.10	10146.66
FTSE All-Share General Industrials (7)	4913.15	0.29	4115.76	4899.05	4866.08	4429.52	3.66	1.54	17.69	140.27	6684.33
FTSE All-Share Industrial Engineering (6)	14301.40	-0.45	11980.32	14366.11	14473.71	14775.88	2.28	2.24	19.60	286.09	19555.44
FTSE All-Share Industrial Support Services (29)	9627.28	0.83	8064.80	9548.23	9565.39	9323.80	2.24	1.40	31.94	197.40	11310.59
FTSE All-Share Industrial Transportation (7)	5241.43	1.29	4390.76	5174.69	5294.67	4748.43	1.86	3.81	14.08	90.85	5580.42
FTSE All-Share Industrial Materials (1)	16002.99	-3.03	509.28	16503.08	16603.10	12102.26	2.16	3.29	14.11	345.06	20602.83
FTSE All-Share Industrial Metals and Mining (8)	6707.61	-0.38	5618.98	6732.92	6858.97	7470.06	6.68	2.46	6.10	443.99	10973.08
FTSE All-Share Precious Metals and Mining (5)	7980.50	-0.69	6685.28	8035.78	8210.45	9329.41	3.92	-1.34	-19.05	294.42	5802.13
FTSE All-Share Chemicals (7)	9679.17	-0.18	8108.26	9697.02	9726.81	12413.43	3.63	1.41	19.55	269.95	9944.79
FTSE All-Share Oil. Gas and Coal (13)	8699.86	0.28	7287.89	8675.44	8899.88	8237.31	4.02	1.64	15.21	267.74	11326.12
FTSE Sector Indices											
Non Financials (318)	**4904.47**	**0.60**	**4416.02**	**4875.41**	**4917.03**	**4712.40**	**3.72**	**1.62**	**16.59**	**149.99**	**9154.30**

Hourly movements	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	High/day	Low/day
FTSE 100	7418.64	7424.38	7416.13	7433.12	7444.14	7455.68	7450.86	7488.15	7462.54	7488.15	7409.78
FTSE 250	17542.69	17592.11	17612.30	17607.07	17660.18	17644.81	17651.05	17701.40	17631.68	17707.51	17541.41
FTSE SmallCap	5896.08	5898.22	5898.08	5895.32	5895.19	5897.41	5898.71	5903.14	5900.03	5905.65	5892.00
FTSE All-Share	4015.20	4019.36	4016.19	4023.77	4030.41	4035.26	4033.27	4051.93	4038.05	4051.93	4011.76

Time of FTSE 100 Day's high:14:00:00 Day's Low07:35:30 FTSE 100 2010/11 High: 8014.31(20/02/2023) Low: 7256.94(07/07/2023)
Time of FTSE All-Share Day's high:14:00:00 Day's Low07:35:00 FTSE 100 2010/11 High: 4377.36(16/02/2023) Low: 3953.40(21/08/2023)

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FT 30 INDEX

	Oct 05	Oct 04	Oct 03	Oct 02	Sep 29	Yr Ago	High	Low
FT 30	2588.20	2568.70	2575.90	2603.60	2639.10	0.00	2895.30	2454.10
FT 30 Div Yield	-	-	-	-	-	0.00	3.93	2.74
P/E Ratio net	-	-	-	-	-	0.00	19.44	14.26

FT 30 hourly changes

8	9	10	11	12	13	14	15	16	High	Low
2567.9	2580.9	2581	2584	2592.3	2593.1	2594.4	2604.4	2591.1	2605.2	2567.9

FT30 constituents and recent additions/deletions can be found at www.ft.com/ft30

FT WILSHIRE 5000 INDEX SERIES

	Oct 04		Oct 04
FT Wilshire 5000	42876.20	FT Wilshire Mid Cap	5298.18
FT Wilshire 2500	5505.34	FT Wilshire Small Cap	4811.01
FT Wilshire Mega Cap	5661.50	FT Wilshire Micro Cap	4238.39
FT Wilshire Large Cap	5602.63		

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FTSE GLOBAL EQUITY INDEX SERIES

Oct 5 Regions & countries	No of stocks	US $ indices	Day %	Mth %	YTD %	Total retn	YTD %	Gr Div Yield
FTSE Global All Cap	10103	720.91	0.2	-6.3	6.0	1178.73	7.9	2.2
FTSE Global All Cap	10103	720.91	0.2	-6.3	6.0	1178.73	7.9	2.2
FTSE Global Large Cap	2003	657.96	0.2	-5.7	8.2	1109.07	10.2	2.2
FTSE Global Mid Cap	2293	879.84	0.2	-7.5	-0.4	1353.49	1.4	2.4
FTSE Global Small Cap	5807	904.88	-0.1	-8.7	0.4	1329.18	2.1	2.2
FTSE All-World	4296	426.35	0.2	-6.0	6.6	738.34	8.6	2.2
FTSE World	2625	778.17	0.2	-6.1	7.5	1808.09	9.4	2.2
FTSE Global All Cap ex UNITED KINGDOM In	9824	762.40	0.2	-6.4	6.2	1221.92	8.1	2.1
FTSE Global All Cap ex USA	8334	486.88	-0.8	-6.9	-0.4	891.50	2.3	3.2
FTSE Global All Cap ex JAPAN	8670	752.37	0.3	-6.2	6.1	1240.60	8.1	2.2
FTSE Global All Cap ex Eurozone	9462	763.61	0.1	-6.2	6.2	1220.25	8.1	2.1
FTSE Developed	2120	715.85	0.3	-6.1	7.7	1177.27	9.6	2.1
FTSE Developed All Cap	5745	740.24	0.3	-6.4	6.9	1199.25	8.8	2.1
FTSE Developed Large Cap	778	682.41	0.3	-5.7	9.7	1142.23	11.7	2.0
FTSE Developed Europe Large Cap	197	389.72	0.0	-5.9	2.9	796.24	6.1	3.4
FTSE Developed Europe Mid Cap	343	561.94	0.0	-8.5	-0.8	994.06	1.9	3.4
FTSE Dev Europe Small Cap	737	745.03	-0.5	-9.7	-6.9	1267.32	-4.2	3.5
FTSE North America Large Cap	222	932.93	0.8	-5.2	13.6	1421.69	15.0	1.6
FTSE North America Mid Cap	418	1091.37	0.7	-7.4	-0.1	1540.68	1.3	2.0
FTSE North America Small Cap	1301	1078.06	0.4	-9.2	1.5	1456.66	2.8	1.8
FTSE North America	640	598.27	0.8	-5.6	10.8	932.41	12.3	1.7
FTSE Developed ex North America	1480	262.53	-0.8	-7.1	0.9	517.82	3.8	3.2
FTSE Japan Large Cap	164	390.07	-2.5	-8.0	5.1	587.60	7.6	2.3
FTSE Japan Mid Cap	348	526.81	-2.2	-8.7	-0.5	754.90	2.0	2.6
FTSE Global wi JAPAN Small Cap	921	586.88	-2.3	-8.6	-1.3	874.83	1.3	2.8
FTSE Japan	512	159.30	-2.4	-8.1	4.0	268.79	6.5	2.4
FTSE Asia Pacific Large Cap ex Japan	1219	636.31	-1.1	-6.9	-5.3	1192.91	-2.8	3.1
FTSE Asia Pacific Mid Cap ex Japan	902	960.48	-1.4	-5.7	-0.2	1733.79	2.1	3.0
FTSE Asia Pacific Small Cap ex Japan	2563	543.89	-1.2	-5.7	1.8	952.05	4.1	2.6
FTSE Asia Pacific Ex Japan	2121	509.98	-1.1	-6.8	-4.7	1015.96	-2.3	3.0
FTSE Emerging All Cap	4358	689.42	-0.9	-5.8	-2.1	1237.90	0.6	3.2
FTSE Emerging Large Cap	1225	626.60	-0.9	-6.1	-3.6	1131.94	-0.9	3.2
FTSE Emerging Mid Cap	951	1043.62	-0.8	-4.9	2.1	1884.59	4.9	3.4
FTSE Emerging Small Cap	2182	791.65	-0.7	-3.8	5.1	1356.95	7.8	2.9
FTSE Emerging Europe	150	142.76	-1.1	-3.2	11.1	310.67	15.3	3.0
FTSE Latin America All Cap	251	720.95	-0.7	-8.7	3.3	1508.36	8.3	7.1
FTSE Middle East and Africa All Cap	326	673.63	-0.8	-3.7	-7.0	1276.17	-3.9	3.8
FTSE Global wi UNITED KINGDOM All Cap In	279	314.11	-0.5	-4.9	0.0	664.53	3.2	3.9
FTSE Global wi USA All Cap	1769	1023.54	0.8	-5.9	10.5	1502.98	11.8	1.6
FTSE Europe All Cap	1468	435.96	0.0	-6.6	1.6	854.73	4.7	3.4
FTSE Eurozone All Cap	641	427.68	0.2	-7.5	3.2	831.76	6.3	3.3
FTSE EDHEC-Risk Efficient All-World	4296	458.28	-0.1	-6.8	-1.1	739.13	1.0	2.7
FTSE EDHEC-Risk Efficient Developed Europe	540	313.54	-0.2	-7.4	0.0	568.16	2.9	3.5
Oil & Gas	137	398.53	-2.7	-5.2	-2.5	848.71	0.9	4.3
Oil & Gas Producers	89	408.77	-2.9	-4.4	0.4	895.50	4.0	4.3

Oct 5 Sectors	No of stocks	US $ indices	Day %	Mth %	YTD %	Total retn	YTD %	Gr Div Yield
Oil Equipment & Services	26	262.58	-2.2	-7.7	-5.5	505.62	-2.2	4.9
Basic Materials	423	559.53	-0.5	-7.9	-6.4	1066.58	-3.4	3.8
Chemicals	208	755.86	0.0	-7.9	-3.0	1374.12	-0.7	3.0
Forestry & Paper	18	244.22	0.6	-1.5	-3.1	509.50	-0.3	3.9
Industrial Metals & Mining	114	496.19	-1.6	-10.0	0.4	983.48	3.5	3.8
Mining	83	827.19	-0.7	-7.0	-15.4	1690.30	-11.4	5.1
Industrials	841	497.22	-0.2	-7.9	2.0	808.62	3.8	2.1
Construction & Materials	162	612.09	0.3	-7.0	9.9	1050.70	11.9	2.0
Aerospace & Defense	37	855.68	-1.0	-10.3	-5.4	1353.30	-4.3	1.7
General Industrials	82	252.64	-0.1	-7.2	5.9	456.71	8.1	2.5
Electronic & Electrical Equipment	170	592.04	-0.8	-8.5	-1.3	864.03	0.2	1.7
Industrial Engineering	169	1023.91	-0.4	-7.9	4.2	1659.36	6.0	2.0
Industrial Transportation	131	890.99	-0.3	-6.5	-1.2	1494.50	1.5	3.4
Support Services	90	516.84	0.3	-7.9	2.3	780.58	3.6	1.6
Consumer Goods	582	558.00	0.4	-5.1	3.8	960.15	5.9	2.5
Automobiles & Parts	144	596.77	1.0	-1.3	36.9	987.96	40.0	1.9
Beverages	73	714.40	0.5	-6.4	-7.8	1240.22	-6.1	2.6
Food Producers	133	661.32	0.1	-5.4	-8.2	1166.87	-6.2	2.8
Household Goods & Home Construction	63	539.95	0.1	-7.1	0.5	929.48	2.5	2.6
Leisure Goods	58	246.29	-0.8	-4.9	7.2	353.30	8.6	1.4
Personal Goods	99	872.14	0.4	-8.2	-5.6	1364.77	-4.3	2.0
Tobacco	12	881.57	-0.1	-5.7	-11.6	2664.36	-7.2	7.1
Health Care	354	698.10	0.3	-4.8	-4.2	1131.03	-2.7	1.9
Health Care Equipment & Services	133	1295.96	0.2	-5.0	-6.0	1605.00	-5.3	1.1
Pharmaceuticals & Biotechnology	221	480.33	0.3	-4.7	-3.0	840.54	-1.0	2.3
Consumer Services	438	557.89	0.5	-7.2	8.7	805.36	9.7	1.2
Food & Drug Retailers	66	289.00	0.5	-2.8	-8.1	469.59	-6.2	2.6
General Retailers	144	993.76	0.6	-8.0	11.6	1369.88	12.5	1.0
Media	80	326.37	0.5	-5.3	12.6	474.98	14.0	1.2
Travel & Leisure	148	470.72	0.3	-8.0	6.3	694.99	7.4	1.3
Telecommunication	82	119.13	-0.6	-3.6	-7.4	291.32	-4.2	4.8
Fixed Line Telecommuniations	29	92.06	-0.5	-2.5	-8.5	261.14	-4.6	5.9
Mobile Telecommunications	53	141.55	-0.6	-4.3	-6.9	296.68	-4.0	4.2
Utilities	209	278.59	-0.2	-8.3	-13.5	672.97	-10.9	4.0
Electricity	151	310.67	-0.4	-9.0	-15.0	737.71	-12.6	3.9
Gas Water & Multiutilities	58	284.97	0.4	-6.7	-9.8	715.49	-6.8	4.4
Financials	852	253.48	0.1	-5.5	-2.3	502.58	0.5	3.4
Banks	273	188.87	-0.5	-4.4	-4.7	422.18	-0.8	4.7
Nonlife Insurance	70	379.49	0.7	-1.3	3.7	652.15	6.6	2.9
Life Insurance	50	205.58	0.0	-6.4	-9.7	411.19	-6.5	4.1
Financial Services	218	442.45	0.4	-6.3	4.3	682.24	5.7	1.7
Technology	378	601.39	1.0	-5.8	36.0	791.56	37.0	0.9
Software & Computer Services	180	916.87	1.4	-3.9	35.3	1114.92	35.9	0.6
Technology Hardware & Equipment	198	527.69	0.5	-7.9	36.8	749.98	38.2	1.2
Alternative Energy	22	105.10	0.3	-14.7	-42.6	151.40	-42.3	0.5
Real Estate Investment & Services	140	227.05	-0.9	-8.0	-9.6	453.33	-7.4	2.9
Real Estate Investment Trusts	101	385.61	0.7	-9.7	-11.4	936.75	-8.6	4.5
FTSE Global Large Cap	2003	657.96	0.2	-5.7	8.2	1109.07	10.2	2.2

The FTSE Global Equity Series, launched in 2003, contains the FTSE Global Small Cap Indices and broader FTSE Global All Cap Indices (large/mid/small cap) as well as the enhanced FTSE All-World index Series (large/mid cap) - please see https://research.ftserussell.com/Products/indices/Home/indexfiltergeis?indexName=GEISAC&currency=USD&rtn=CAP&segment=global-developed–emerging. The trade names Fundamental Index® and RAFI® are registered trademarks and the patented and patent-pending proprietary intellectual property of Research Affiliates, LLC (US Patent Nos. 7,620,577; 7,747,502; 7,778,905; 7,792,719; Patent Pending Publ. Nos. US-2006-0149645-A1, US-2007-0055598-A1, US-2008-0288416-A1, US-2010- 0063942-A1, WO 2005/076812, WO 2007/078399 A2, WO 2008/118372, EPN 1733352, and HK1099110). "EDHEC™" is a trade mark of EDHEC Business School As of January 2nd 2006, FTSE is basing its sector indices on the Industrial Classification Benchmark - please see www.ftse.com/icb. For constituent changes and other information about FTSE, please see www.ftse.com. © FTSE International Limited. 2013. All Rights reserved. "FTSE®" is a trade mark of the London Stock Exchange Group companies and is used by FTSE International Limited under licence.

FTSE SECTORS: LEADERS & LAGGARDS

Year to date percentage changes

Aerospace & Defense	36.18	Automobiles & Parts	1.59	FTSE SmallCap Index	-5.58
Software & Comp Serv	18.99	Support Services	0.81	FTSE 250 Index	-6.65
Construct & Material	18.50	Oil Equipment & Serv	0.80	Equity Invest Instr	-7.40
Leisure Goods	17.33	Real Est Invest & Se	0.49	Nonlife Insurance	-8.07
Food & Drug Retailer	16.83	Beverages	31.66	Telecommunications	-8.11
General Retailers	16.17	FTSE 100 Index	0.00	Consumer Goods	-9.65
Media	14.15	Industrial Eng	-0.07	Mobile Telecomms	-9.65
Food Producers	12.51	Pharmace & Biotech	-0.56	Health Care Eq & Srv	-11.03
Consumer Services	12.35	Financials	-0.76	Industrial Metals &	-11.14
Banks	11.58	FTSE All{HY-}Share Index	-1.06	Real Est Invest & Tr	-11.52
Industrials	9.03	Health Care	-1.11	Beverages	-14.57
Travel & Leisure	8.32	Gas Water & Multi	-1.27	Electricity	-15.52
Technology	8.02	Industrial Transport	-1.35	Life Insurance	-19.72
Oil & Gas Producers	6.73	NON FINANCIALS Index	-1.40	Mining	-20.94
Oil & Gas	6.65	Fixed Line Telecomms	-3.19	Basic Materials	-21.22
Financial Services	3.85	Electronic & Elec Eq	-4.25	Tobacco	-22.97
Household Goods & Ho	2.28	Personal Goods	-4.94	Chemicals	-25.12
		Utilities	-5.13	Tech Hardware & Eq	-50.92

FTSE 100 SUMMARY

FTSE 100	Closing Price	Day's Change	FTSE 100	Closing Price	Day's Change
3I Group PLC	2008	25.50	Intertek Group PLC	4124	45.00
Admiral Group PLC	2353	30.00	Jd Sports Fashion PLC	140.00	-4.30
Airtel Africa PLC	119.60	-0.70	Kingfisher PLC	215.00	2.30
Anglo American PLC	2108.5	-33.00	Land Securities Group PLC	585.40	1.00
Antofagasta PLC	1355	-1.00	Legal & General Group PLC	210.40	0.80
Ashtead Group PLC	4779	47.00	Lloyds Banking Group PLC	42.17	-0.29
Associated British Foods PLC	1990	13.00	London Stock Exchange Group PLC	8080	30.00
Astrazeneca PLC	10902	10.00	M&G PLC	191.55	1.10
Auto Trader Group PLC	622.20	9.80	Marks And Spencer Group PLC	227.40	2.30
Aviva PLC	388.30	0.60	Melrose Industries PLC	447.40	0.60
B&M European Value Retail S.A.	560.60	10.20	Mondi PLC	1356.5	6.50
Bae Systems PLC	983.20	5.20	National Grid PLC	947.60	10.40
Barclays PLC	152.52	-1.36	Natwest Group PLC	222.50	-1.70
Barratt Developments PLC	418.60	8.50	Next PLC	7042	70.00
Beazley PLC	533.00	6.50	Ocado Group PLC	563.00	8.00
Berkeley Group Holdings (The) PLC	4022	52.00	Pearson PLC	881.40	11.40
BP PLC	499.05	-0.40	Pershing Square Holdings LTD	2946	12.00
British American Tobacco PLC	2508.5	45.00	Phoenix Group Holdings PLC	458.20	4.00
Bt Group PLC	114.55	1.45	Prudential PLC	855.20	-1.60
Bunzl PLC	2933	24.00	Reckitt Benckiser Group PLC	5820	76.00
Burberry Group PLC	1836	19.50	Relx PLC	2852	34.00
Centrica PLC	150.35	3.20	Rentokil Initial PLC	603.20	6.20
Coca-Cola Hbc AG	2183	7.00	Rightmove PLC	570.20	8.80
Compass Group PLC	2043	32.00	Rio Tinto PLC	4957.5	26.00
Convatec Group PLC	216.00	1.60	Rolls-Royce Holdings PLC	210.50	-0.30
Croda International PLC	4734	-5.00	Rs Group PLC	723.00	8.60
Dcc PLC	4471	-3.00	Sage Group PLC	981.80	3.40
Dechra Pharmaceuticals PLC	3796	8.00	Sainsbury (J) PLC	256.40	2.30
Diageo PLC	3055.5	22.00	Schroders PLC	394.20	-0.50
Diploma PLC	2902	-2.00	Scottish Mortgage Investment Trust PLC	667.40	1.80
Endeavour Mining PLC	1498	-8.00	Segro PLC	709.80	6.60
Entain PLC	905.00	2.40	Severn Trent PLC	2308	36.00
Experian PLC	2719	32.00	Shell PLC	2532.5	11.00
F&C Investment Trust PLC	863.00	-3.00	Smith & Nephew PLC	965.20	-7.40
Flutter Entertainment PLC	13280	140.00	Smith (Ds) PLC	279.20	0.80
Frasers Group PLC	805.50	18.00	Smiths Group PLC	1613	-2.00
Fresnillo PLC	513.00	-7.40	Smurfit Kappa Group PLC	2710	-6.00
Glaxosmithkline PLC	1483	-3.80	Spirax-Sarco Engineering PLC	9292	38.00
Glencore PLC	439.85	-3.45	Sse PLC	1514.5	6.50
Haleon PLC	336.25	-2.90	St. James's Place PLC	798.60	6.20
Halma PLC	1938	25.50	Standard Chartered PLC	749.40	5.80
Hargreaves Lansdown PLC	758.40	6.20	Taylor Wimpey PLC	113.25	1.30
Hikma Pharmaceuticals PLC	2063	39.00	Tesco PLC	280.40	9.70
Howden Joinery Group PLC	695.80	3.40	Unilever PLC	4030.5	18.00
HSBC Holdings PLC	644.50	4.00	Unite Group PLC	895.50	14.50
Imi PLC	1516	-4.00	United Utilities Group PLC	933.20	13.20
Imperial Brands PLC	1642	62.00	Vodafone Group PLC	76.10	0.93
Informa PLC	724.00	7.60	Weir Group PLC	1822.5	-20.50
Intercontinental Hotels Group PLC	6082	36.00	Whitbread PLC	3317	31.00
International Consolidated Airlines Group S.A.	155.10	3.85	Wpp PLC	719.00	1.00

UK STOCK MARKET TRADING DATA

	Oct 05	Oct 04	Oct 03	Oct 02	Sep 29	Yr Ago
Order Book Turnover (m)	108.14	90.66	153.56	160.59	160.59	160.59
Order Book Bargains	519887.00	553699.00	596207.00	530542.00	530542.00	530542.00
Order Book Shares Traded (m)	2560.00	1358.00	1461.00	1614.00	1614.00	1614.00
Total Equity Turnover (£m)	4255.14	7198.30	6485.95	5306.52	5306.52	5306.52
Total Mkt Bargains	702561.00	746593.00	1105374.00	718979.00	718979.00	718979.00
Total Shares Traded (m)	5421.00	4875.00	5798.00	5335.00	5335.00	5335.00

† Excluding intra-market and overseas turnover. *UK only total at 6pm. ‡ UK plus intra-market turnover. (u) Unavaliable. (c) Market closed.

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UK RIGHTS OFFERS

Issue price	Amount paid up	Latest renun. date	High	Low	Stock	closing Price p	+or-

There are currently no rights offers by any companies listed on the LSE.

UK COMPANY RESULTS

Company		Turnover		Pre-tax		EPS(p)		Div(p)		Pay day	Total	
ICG Enterprise Trust	Int			**6.948**	125.918	**10.210**	183.780	**8.00000**	7.00000	Dec 1	**17.000**	23.000
Investment Company (The)	Pre			**0.784**	0.209L	**15.490**	5.210L	**0.00000**	0.00000	-	**0.000**	0.000
North American Income Trust (The)	Int			**17.618L**	22.107	**13.450L**	14.770	**2.60000**	2.50000	Oct 27	**6.100**	6.500
Vertu Motors	Int	**2422.454**	1999.712	**30.151**	26.939	**6.580**	6.190	**0.85000**	0.70000	Jan 19	**2.300**	1.750

Figures in £m. Earnings shown basic. Figures in light text are for corresponding period year earlier.
For more information on dividend payments visit www.ft.com/marketsdata

UK RECENT EQUITY ISSUES

Issue date	Issue price(p)	Sector	Stock code	Stock	Close price(p)	+/-	High	Low	Mkt Cap (£m)
09/05	10.00	AIM	TRYB	Tribe Technology PLC	9.63	0.00	11.10	9.50	2136.2

§Placing price. *Intoduction. ‡When issued. Annual report/prospectus available at www.ft.com/ir
For a full explanation of all the other symbols please refer to London Share Service notes.

MARKET DATA

FT500: THE WORLD'S LARGEST COMPANIES

Stock	Price	Day Chg	52 Week High	52 Week Low	Yld	P/E	MCap m
Australia (A$)							
ANZ Bank	25.09	0.17	26.08	22.39	6.01	10.53	47876.83
BHP Group	43.43	-0.29	50.05	36.93	9.25	11.32	139774.71
CmwBkAu	98.98	0.89	111.38	93.05	4.25	16.75	105342.62
CSL	249.46	0.76	314.21	244.37	1.39	36.56	76514.74
NatAusBk	28.51	0.20	32.83	25.10	5.49	12.12	56641.45
Telstra	3.82	0.04	4.46	3.76	4.20	22.81	28025.26
Wesfarmers	52.57	0.18	54.28	43.29	3.59	24.09	37851.83
Westpac Bank	21.01	0.27	24.50	20.03	6.17	11.61	46812.07
Woolworths	37.52	0.56	40.35	31.67	2.65	28.28	29102.14
Belgium (€)							
AnBshInBv	51.04	0.90	62.01	45.69	1.48	18.49	93370.54
KBC Grp	56.86	0.10	72.46	46.77	6.97	7.47	24978.68
Brazil (R$)							
Ambev	13.12	-0.09	16.88	12.60	5.96	14.19	39932.5
Bradesco	12.60	-	17.67	11.15	7.46	9.16	12975.61
Cielo	3.48	0.05	6.07	3.24	8.85	5.29	1826.6
ItauHldFin	23.20	0.17	26.04	19.53	6.62	7.04	22224.2
Petrobras	35.39	-0.23	42.08	23.61	40.81	3.08	50886.51
Vale	65.78	-0.09	96.30	61.00	8.36	5.47	57684.7
Canada (C$)							
Bausch Hlth	11.01	-0.01	13.81	7.56	-	-16.44	2894.44
BCE	50.67	0.51	65.66	49.57	7.39	20.26	33664
BkMontrl	110.14	-0.11	137.64	108.12	5.12	11.02	57820.84
BkNvaS	59.26	0.14	74.41	57.57	6.90	9.41	52018.16
Brookfield	58.88	11.29	63.88	41.28	0.94	446.60	69948.82
CanadPcR	99.97	-0.44	112.96	90.84	0.75	21.90	67821.5
CanImp	50.76	-0.18	65.24	50.03	6.60	10.53	34168.05
CanNatRs	82.78	0.08	90.70	67.13	4.08	12.21	65727.51
CanNatRy	146.58	0.31	175.39	143.99	2.06	18.93	69769.89
Enbridge	43.52	0.40	56.37	42.75	7.97	23.32	67366.99
GtWesLif	37.49	-0.12	41.28	27.99	5.35	15.73	25461.11
ImpOil	77.90	-0.71	85.11	60.19	2.19	8.38	32673.91
Manulife	24.47	0.16	27.50	20.81	5.64	3.68	32488.63
Nutrien	80.16	0.25	119.60	70.69	3.31	8.45	28869.17
RylBkC	114.66	0.47	140.18	111.49	4.53	11.24	117096.53
SHOP	70.73	-1.50	93.83	33.00	-	-34.09	62045.88
Suncor En	43.90	0.12	50.37	37.09	4.59	9.55	41547.77
ThmReut	170.85	2.37	187.70	141.11	1.49	29.67	56654.55
TntoDom	78.98	-0.46	94.05	76.32	4.71	10.36	104205.12
TrnCan	46.07	0.84	66.19	43.70	7.88	51.58	34808.34
China (HK$)							
AgricBkCh	2.81	0.01	3.28	2.22	-	3.84	11029.4
Bk China	2.67	-	3.45	2.51	9.00	3.55	28509.34
BkofComm	4.45	-0.04	5.65	3.84	8.74	3.72	19894.09
BOE Tech	0.64	-0.03	0.87	0.53	-	10.29	16.26
Ch Coms Cons	3.69	0.01	5.52	3.09	6.40	3.22	2081.85
Ch Evrbrght	2.22	-0.03	2.78	2.04	8.94	3.17	3594.04
Ch Rail Cons	4.75	0.06	7.46	3.75	5.38	2.59	1259.32
Ch Rail Gp	3.87	-0.01	6.30	3.48	5.27	3.00	2079.12
ChConstBk	4.27	0.01	5.70	4.01	9.43	3.19	131082.74
China Vanke	8.29	-0.03	17.78	8.28	12.23	4.62	2335.68
ChinaCitic	3.47	-0.03	4.74	2.92	9.90	3.00	6593.99
ChinaLife	11.58	-0.14	15.84	8.53	4.39	10.90	11002.74
ChinaMBank	31.20	0.10	53.00	25.40	5.78	5.48	18289.65
ChinaMob	64.25	0.05	70.20	46.85	6.32	10.13	168025.02
ChinaPcIns	18.70	-0.10	26.50	12.10	5.65	7.62	6626.81
ChMinsheng	2.56	-0.02	3.52	2.23	8.79	3.65	2719.74
ChMrchSecs	13.98	-0.07	15.91	12.12	3.73	15.92	14205.79
Chna Utd Coms	4.91	-	6.45	3.32	2.14	20.36	20816.04
ChShenEgy	24.30	-	28.70	20.70	11.42	7.59	10479.75
ChShpbldng	4.17	0.07	5.32	3.40	0.07	-66.49	12608.08
ChStConEng	5.53	-0.03	7.35	4.68	4.41	4.59	31284.08
ChUncHK	5.54	-0.01	6.58	3.27	5.20	9.11	21645.11
CNNC Intl	7.30	-0.01	7.52	5.81	1.98	15.35	18872.9
CSR	3.60	-0.03	5.26	2.37	5.82	8.31	2009.29
Daqin	7.29	0.03	8.21	6.36	-	12.19	15137.91
GuosenSec	9.21	-0.11	10.90	8.43	2.83	17.68	11523.53
HaitongSecs	4.52	-0.02	6.01	3.77	4.86	10.19	1967.83
Hngzh HikVDT	33.80	0.35	48.84	28.50	2.00	26.34	42149.91
Hunng Pwr	3.62	-0.03	5.28	2.62	-	-87.79	2172.66
IM Baotou Stl	1.72	0.01	2.14	1.71	-	27.46	7417.26
In&CmBkCh	3.60	-0.01	4.73	3.35	8.73	3.56	39897.49
IndstrlBk	16.29	0.04	18.27	15.01	7.04	4.48	46332.26
Kweichow	1798.55	-15.45	1935	1359	1.39	33.99	309326.32
Midea	0.34	-0.04	0.44	0.30	-	-3.63	12.88
New Ch Life Ins	18.30	-0.08	25.00	12.04	6.14	5.22	2416.4
PetroChina	5.48	-	6.05	3.01	8.21	6.33	14763.53
PingAnIns	42.30	-	64.15	31.30	6.19	8.90	40226.08
PngAnBnk	11.20	0.03	15.74	10.39	4.42	4.90	29756.47
Pwr Cons Corp	5.35	0.12	8.15	5.02	1.80	8.37	9574.5
SaicMtr	14.80	-0.04	15.65	13.09	4.45	10.83	23673.85
ShenwanHong	0.09	-	0.15	0.07	-	2.57	97.12
ShgPdgBk	7.10	-0.03	8.22	6.64	5.57	6.03	28532.08
Sinopec Corp	4.04	0.01	5.47	3.06	9.41	8.15	12766.63
Sinopec Oil	2.13	0.03	2.39	1.82	-	73.56	3957.1
Denmark (kr)							
DanskeBk	159.85	1.25	170.80	91.28	-	322.11	19461.46
MollerMrsk	12985	245.00	17265	11100	15.27	1.95	13683.54
NovoB	635.80	1.10	690.30	384.10	0.97	43.04	308408.2
Finland (€)							
Nokia	3.36	-0.09	4.88	3.36	2.65	4.65	19955.23
SampoA	37.03	0.41	45.46	34.55	4.82	26.29	19559.54
France (€)							
Airbus Grpe	123.52	-0.02	138.76	91.58	1.44	25.44	102809.19
AirLiquide	156.64	0.06	168.48	114.48	1.87	26.04	86403.28
AXA	27.32	0.11	30.34	22.40	6.17	9.57	64875.54
BNP Parib	59.20	0.56	67.02	41.53	6.53	8.51	73151.67
ChristianDior	696.00	6.00	872.00	582.00	1.71	19.13	132298.43
Cred Agr	11.42	0.07	12.03	8.11	9.11	6.36	36711.8
Danone	51.91	0.30	61.88	46.78	3.82	25.68	37049.77
EDF	12.00	-	12.05	7.27	2.41	-2.31	53889.44
Engie SA	14.14	0.11	15.56	11.35	9.81	-4.47	36261.81
EssilorLuxottica	163.00	-0.12	188.40	144.35	1.96	31.51	77858.9
Hermes Intl	1731.8	0.80	2050.5	1196	0.74	46.35	192524.49
LOreal	391.35	-0.70	442.60	300.70	1.52	36.37	220876.93
LVMH	720.60	8.10	904.60	595.50	1.65	22.75	380969.31
Orange	10.99	0.00	11.87	9.08	6.31	18.18	30779.36
PernodRic	159.95	0.25	218.00	156.65	2.64	16.75	43057.54
Renault	35.07	-0.55	43.96	28.94	0.71	3.11	10921.19
Safran	143.22	-0.54	153.60	96.74	0.93	19.69	64438.67
Sanofi	102.86	1.04	105.18	78.90	3.43	15.15	136969.66
Sant Gbn	53.52	-0.59	62.14	36.67	3.70	10.17	28968.52
Schneider	154.14	0.32	167.98	116.14	2.02	22.13	92981.32
SocGen	22.42	-0.02	28.39	19.33	7.52	4.89	19373.31
Total	59.77	-0.32	64.55	49.30	4.52	8.56	151829.47
UnibailR	49.68	0.06	73.09	39.68	-	-7.39	7615.7
Vinci	101.58	-0.32	112.40	80.84	3.90	13.04	63890.26
Vivendi	8.33	-0.12	10.22	7.59	2.97	-8.67	9036.54
Germany (€)							
Allianz	220.70	1.05	234.55	162.66	5.12	10.15	93733.7
BASF	41.35	-0.51	53.77	40.65	8.15	-20.45	38859.05
Bayer	43.87	-0.40	65.66	43.56	5.42	30.12	45385.47
BMW	94.29	-1.11	113.46	70.64	8.93	5.48	59773.52
Continental	65.08	-0.36	79.24	45.96	2.28	19.66	13706.95
Deut Bank	9.95	0.03	12.36	7.60	2.99	4.38	21375.26
Deut Tlkm	19.82	0.15	23.13	17.36	3.50	18.02	104085.39
DeutsPost	44.73	0.54	45.03	29.68	4.14	12.32	60466.66
E.ON	10.79	0.08	12.29	7.28	4.68	49.50	30011.83
Fresenius Med	39.33	0.30	49.62	26.19	2.82	19.55	12152.18
Fresenius SE	27.95	-	31.22	19.76	3.26	15.85	16438.3
HenkelKgaA	60.12	0.64	70.10	56.55	3.02	18.73	16447.55
Linde	351.15	-5.75	369.05	274.90	1.03	56.27	180432.37
Mercedes-Benz	64.42	-0.51	76.10	50.65	8.00	4.51	72575.27
MuenchRkv	369.50	0.90	381.20	236.10	3.11	18.15	53100.17
SAP	122.14	0.14	131.70	83.25	1.66	82.17	158010.05
Siemens	132.26	-1.28	167.00	101.58	3.18	12.04	111421.41
Volkswgn	119.55	-1.80	193.90	118.75	7.21	5.04	37149.58
Hong Kong (HK$)							
AIA	65.95	0.55	93.65	57.25	2.23	98.71	96990.97
BOC Hold	21.00	0.05	28.25	20.80	6.18	7.39	28350.49
Ch OSLnd&Inv	15.84	0.12	23.20	14.58	4.77	8.39	22137.01
ChngKng	39.90	-0.05	51.70	39.40	5.46	7.89	18090.82
Citic Ltd	6.85	0.13	10.86	6.68	9.08	3.17	25444.38
Citic Secs	14.86	-0.24	19.18	11.82	3.43	10.22	4971.46
CK Hutchison	40.50	0.20	54.55	38.80	6.91	5.63	19806.65
CNOOC♦	13.12	-0.06	14.28	9.28	10.31	4.54	74678.56
HangSeng	94.55	0.65	135.50	93.15	4.55	13.72	23081.6
HK Exc&Clr	285.60	0.20	382.40	208.20	2.39	32.80	46235.32
MTR	30.25	0.30	43.00	29.65	4.14	21.10	24002.73
SandsCh	22.30	-0.05	31.45	12.50	-	-37.21	23045.57
SHK Props	83.60	0.65	115.90	77.10	5.66	10.60	30933.14
Tencent	299.80	2.20	411.00	188.69	0.75	14.28	364728.16
India (Rs)							
Bhartiartl	928.85	4.60	948.70	735.80	0.31	65.90	66906.17
HDFC Bk	1535.75	6.20	1757.5	1384	1.01	17.38	139840.99
Hind Unilevr	2519.55	11.70	2769.65	2393	1.50	59.24	71097.76
HsngDevFin	2724.3	-23.05	2927.4	2160	1.16	18.17	61324.4
ICICI Bk	940.85	10.80	1008.7	796.00	0.52	18.52	79128.36
Infosys	1463.45	19.10	1672.6	1185.3	2.24	25.52	72946.44
ITC	436.05	-0.05	499.70	324.75	2.84	28.07	65309.31
L&T	3096.05	68.30	3114.9	1858.05	0.69	39.50	51104.76
OilNatGas	182.20	-0.55	192.25	125.80	7.46	6.28	27528.29
RelianceIn	2314.1	-0.05	2856	2180	0.34	24.89	188044.99
SBI NewA	592.15	5.90	629.55	499.35	1.85	8.14	63468.98
SunPhrmInds	1119.1	-4.70	1169.7	922.45	0.91	32.84	32247.85
Tata Cons	3589.35	51.60	3633.75	3005	1.54	30.93	157733.87
Israel (ILS)							
TevaPha	3745	-91.00	4125	2637	-	-	-
Italy (€)							
Enel	5.55	0.00	6.38	3.96	6.96	14.01	59461.45
ENI	14.44	-0.06	15.63	11.33	6.04	5.48	51334.78
Generali	18.61	-0.16	20.06	13.67	6.18	7.03	30549.52
IntSPaolo	2.36	0.00	2.64	1.65	6.87	7.17	45513.57
Unicred	21.84	0.29	23.82	10.44	4.48	5.13	41035.49
Japan (¥)							
AstellasPh	2027	9.50	2360.5	1823.5	2.91	34.98	24684.15
Bridgestne	5821	169.00	6134	4548	3.21	10.98	27956.24
Canon	3491	49.00	3912	2790.5	3.66	13.86	31332.52
CntJpRwy	3394	52.00	3926	2984	0.78	12.91	23524.24
Denso	2292	47.00	2613.75	1597.25	1.98	5.04	48611.29
EastJpRwy	7974	75.00	8949	6706	1.23	24.41	20279.49
Fanuc	3948	37.00	24645	3838	2.67	24.13	26648.74
FastRetail	31750	390.00	37550	25386.67	0.78	34.10	67989.07
Fuji Hvy Ind	2695.5	58.50	3115	1980	2.77	8.52	13951.84
Hitachi	8880	203.00	10170	6206	1.61	12.54	56065.29
HondaMtr	1601.5	47.00	1821	1000.33	7.37	3.16	58564.69
JapanTob	3239	-33.00	3487	2378	6.28	12.56	43592.08
KDDI	4502	74.00	4767	3873	2.95	15.01	69760.85
Keyence	55390	600.00	71890	47920	0.53	37.07	90651.55
MitsbCp	6779	95.00	7732	3994	2.61	10.33	65575
MitsubEst	1006.16	16.14	1062.17	920.16	-	-	-
MitsubishiEle	1768.5	26.00	2105	1273	2.22	15.94	25553.16
MitsuiFud	917.47	33.44	1147.48	799.06	-	-	-
MitUFJFin	1255	48.50	1344	642.90	2.51	9.99	107150.38
Mizuho Fin	2503	79.50	2724.5	1582.5	3.34	10.06	42769.37
Murata Mfg	2683.5	26.50	2912	2146	1.83	7.55	36611.44
Nippon TT	174.00	2.70	183.40	147.48	2.71	12.49	106024.46
Nissan Mt	606.00	15.40	712.50	408.10	1.62	8.61	17211.74
Nomura	588.40	22.70	661.70	467.60	2.84	16.34	12526.09
Nppn Stl	3329	93.00	3816	2018.5	5.32	5.48	21288.79
Panasonic	1571.5	2.00	1808	1020.5	1.88	8.94	25953.84
Seven & I	5758	83.00	6619	5246	1.87	18.88	34346.98
ShnEtsuCh	4288	71.00	21055	3797	2.29	13.04	58406.11
Softbank	6082	8.00	7297	4766	0.71	6.48	60162.92
Sony	12320	210.00	14100	9251	0.60	17.38	104549.15
SumitomoF	7318	247.00	7849	4077	3.23	12.57	65866.14
Takeda Ph	4419	67.00	4873	3708	4.01	23.47	47053.52
TokioMarine	3362	90.00	3688	2511	2.92	18.22	45304.02
Toyota	2590	112.50	2911.5	1764	2.28	11.83	284349.84
Mexico (Mex$)							
AmerMvl	16.40	0.11	20.25	15.66	2.62	11.28	41116.45
FEMSA UBD	194.47	-0.87	200.40	125.07	1.72	29.87	23077.96
WalMrtMex	65.17	-0.41	79.15	61.79	1.56	22.40	62485.8
Netherlands (€)							
ASML Hld	548.40	-9.10	698.10	376.10	1.05	29.53	232809.97
Heineken	83.68	0.94	106.30	78.28	2.05	18.81	50757.04
ING	12.53	0.09	13.57	8.62	4.42	7.80	47743.32
Unilever	46.57	0.22	50.93	43.94	3.08	23.91	142117.25
Norway (Kr)							
DNB	210.40	-1.70	220.30	172.20	9.25	12.02	29554.62
Equinor	341.00	2.15	399.95	278.70	2.77	4.23	93249.67
Telenor	119.25	0.05	134.95	87.60	7.65	29.74	15196.41
Qatar (QR)							
QatarNtBk	15.38	-0.06	20.99	14.31	3.72	9.34	39026.4
Saudi Arabia (SR)							
AlRajhiBnk	66.60	-0.40	7317	0.00	1.79	16.92	71028.64
NatnlcombnK	33.45	-0.15	1552.5	0.00	4.06	11.06	53511.42
SaudiBasic	81.10	-1.00	2115	0.00	4.99	64.47	64869.63
SaudiTelec	37.00	-0.65	8480	0.00	4.12	15.72	49325.45
Singapore (S$)							
DBS	33.27	0.05	36.40	30.30	4.54	9.14	62676.46
JardnMt US$	45.07	-0.26	54.79	42.60	4.56	27.72	13012.92
OCBC	12.75	0.10	13.39	11.42	5.16	8.84	41869.25
SingTel	2.37	0.02	2.82	2.31	4.02	17.47	28582.94
UOB	28.16	0.09	31.40	25.91	4.64	7.80	34410.29
South Africa (R)							
Firstrand	62.92	0.56	74.77	58.60	6.31	8.70	18055.82
MTN Grp	112.90	1.84	149.42	107.35	2.89	10.26	10882.24
Naspers N	3006.76	8.94	17839200	2955.71	0.23	8.28	62260.36
South Korea (KRW)							
HyundMobis	232000	-1000.00	250000	192000	1.69	7.29	16197.67
KoreaElePwr	17380	-120.00	22750	16500	-	-0.55	8261.94
SK Hynix	120200	4800	129000	73100	0.98	-10.28	64797.58
SmsungEl	66700	-800.00	73600	54000	2.12	12.99	294853.17
Spain (€)							
BBVA	7.64	0.02	7.88	4.51	5.58	6.59	48006.73
BcoSantdr	3.55	0.03	3.87	2.40	3.29	6.21	60510.26
CaixaBnk	3.73	0.03	4.14	3.10	6.12	8.31	29499.13
Iberdrola	10.14	0.12	12.25	9.09	7.53	14.21	67774.55
Inditex	34.50	0.16	36.48	21.35	2.19	22.38	113228.96
Repsol	14.39	-0.02	15.87	12.03	4.82	6.31	19356.93
Telefonica	3.79	0.05	4.15	3.22	7.85	14.69	22920.18
Sweden (SKr)							
AtlasCpcoB	128.10	1.65	140.95	89.48	1.60	24.59	18148.15
Ericsson	52.00	-0.77	73.56	49.79	4.88	14.68	14548.11
H & M	148.64	-1.76	189.58	102.28	4.34	69.61	19363.74
Investor	208.70	2.15	223.60	158.58	2.01	4.75	34512.05
Nordea Bk	118.14	-0.02	134.94	94.73	7.78	7.97	38277.98
SEB	128.30	0.75	133.50	104.40	5.13	8.25	24638.98
SvnskaHn	94.36	0.64	112.90	83.92	5.69	7.65	16656.08
Swedbank	196.45	0.05	219.90	140.25	4.84	7.67	20184.39
Telia Co	22.76	0.16	32.92	20.98	6.64	-6.01	8122.95
Volvo	222.85	0.05	233.85	160.12	3.06	11.93	32129.6
Switzerland (SFr)							
ABB	32.66	0.05	35.74	24.56	2.46	20.30	67246
CredSuisse	0.82	0.01	5.86	0.66	11.88	-0.31	3611.19
Nestle	102.90	0.06	116.84	102.26	2.80	29.09	300577.65
Novartis	87.23	-0.37	89.82	69.89	3.51	27.72	217345.21
Richemont	111.65	1.20	161.10	93.72	2.05	16.81	63761.61
Roche	246.70	2.75	335.85	243.75	3.76	18.43	189620.06
Swiss Re	92.20	0.26	99.68	68.18	6.07	18.09	32025.88
Swisscom	537.40	1.00	619.40	443.40	4.00	17.10	30456.06
UBS	21.91	-0.02	23.80	13.88	2.40	2.22	75854.34
Zurich Fin	412.00	2.20	458.30	384.60	5.67	14.70	65968.57
Taiwan (NT$)							
Chunghwa Telecom	115.00	-	128.00	105.50	4.05	24.22	27636.06
Formosa PetChem	78.20	0.10	90.00	75.20	1.39	-58.00	23076.83
HonHaiPrc	103.50	0.50	116.50	98.00	5.08	11.76	44448.49
MediaTek	786.00	6.00	795.00	538.00	9.59	15.35	38947.9
TaiwanSem	528.00	8.00	594.00	370.00	2.07	14.66	424161.03
Thailand (THB)							
PTT Explor	32.00	-0.25	36.50	29.50	6.22	12.17	24758.41
United Arab Emirates (Dhs)							
Emirtestele	24.30	0.70	38.98	11.60	2.93	24.15	57535.64
United Kingdom (p)							
Anglo American	2108.5	-33.00	3648.5	16.78	7.43	15.68	34293.33
AscBrFd	1990	13.00	2167	1232.5	2.20	20.88	18645.69
AstraZen	10902	10.00	12828.45	9499.21	2.06	35.09	205460.56
Aviva	388.30	0.60	467.30	366.00	7.98	-19.61	12929.84
Barclays	152.52	-1.36	198.86	128.12	4.75	4.41	28209.09
BP	499.05	-0.40	570.57	4.75	3.97	6.38	103858.03
BrAmTob	2508.5	45.00	3473.5	2458.41	6.64	6.48	68214.49
BT	114.55	1.45	161.40	22.98	6.72	6.06	13849.74
Compass	2043	32.00	2250	1765.64	1.54	28.26	42594.8
Diageo	3055.5	22.00	3881.5	2996.75	2.54	18.59	83585.15
GlaxoSmh	1483	-3.80	1609	16.64	3.89	11.70	73843.92
Glencore	439.85	-3.45	583.25	410.95	6.32	7.36	65966.57
HSBC	644.50	4.00	665.60	434.70	5.05	6.83	153283.31
Imperial Brands	1642	62.00	2185	1553.5	8.60	9.33	17935.43
Jardine Mathes.	62.50	-	53.91	46.42	3.36	38.44	18045.43
LlydsBkg	42.17	-0.29	54.33	38.51	5.69	5.34	32613.39
LSE Group	8080	30.00	8893.86	7052	1.32	67.00	49492.7
Natl Grid	947.60	10.40	1229.21	844.29	5.45	12.84	42496.01
Natwest Group	222.50	-1.70	310.00	210.90	6.19	4.98	24019.64
Prudential	855.20	-1.60	1357.5	782.40	1.73	8.62	28630.22
ReckittB	5820	76.00	6570	5502	3.15	18.80	50784.17
RELX	2852	34.00	2870	2124	1.91	31.27	65543.61
RioTinto	4957.5	26.00	6354	4473	7.74	11.96	75418.23
RollsRoyce	210.50	-0.30	233.00	65.21	-	10.67	21543.21
Shell PLC	2532.5	11.00	2663.73	2149.45	3.33	7.83	204488.43
StandCh	749.40	5.80	799.40	515.60	1.89	9.80	24833.11
Tesco	280.40	9.70	307.23	194.35	4.12	27.82	24246.08
Unilever	4030.5	18.00	4868.64	3797.5	3.69	14.41	122998.4
Vodafone	76.10	0.93	108.00	69.73	10.39	2.03	25055.54
WPP	719.00	1.00	1082	703.20	5.48	14.73	9396.98
United States of America ($)							
21stC Fox A	29.93	-0.39	37.26	28.02	1.41	13.50	7591.49
3M	86.70	-1.32	133.91	86.55	6.60	-32.15	47857.74
AbbottLb	95.33	-0.32	115.83	93.25	1.97	34.02	165425.26
Abbvie	147.58	-0.11	168.11	130.96	3.75	31.75	260482.76
Accenture	307.61	-1.79	330.44	242.80	1.38	27.94	204345.61
Activision Bli.	93.88	0.13	94.21	70.94	-	35.95	73864.63
Adobe	512.40	-6.02	570.24	276.60	-	49.79	233295.72
Advanced Micro	101.54	-2.53	132.83	54.57	-	-2654.37	164055.27
AEP	70.75	-2.54	100.32	69.88	4.42	19.26	36448.71
Aflac	76.20	0.13	78.43	56.26	2.06	10.68	45268.15
AirProd	278.93	-5.95	328.56	224.75	2.31	29.82	61963.95
Allstate	111.38	-0.07	142.15	100.57	2.99	-11.26	29134.08
Alphabet	134.80	-0.44	139.16	83.34	-	29.80	781974.8
Altria	41.75	0.10	51.57	40.91	8.61	11.49	74089.97
Amazon	125.04	-1.96	145.86	81.43	-	103.76	1290131.59
AmerAir	12.74	0.01	19.08	11.79	-	3.43	8320.57
AmerExpr	145.49	-0.55	182.15	130.65	1.47	15.46	107143.72
AmerIntGrp	59.65	0.29	64.88	45.66	2.12	9.51	42464.81
AmerTower	157.16	-0.52	228.97	155.61	3.75	80.16	73261
Amgen	264.14	-1.30	296.67	211.71	2.95	18.61	141290.4
Amphenol Corp	82.10	-1.24	90.28	65.21	0.97	27.96	48968.87
Analog Devices	170.07	-3.73	200.10	133.48	1.80	24.48	84745.76
Aon Cp	324.96	-	347.37	266.35	0.68	26.42	65923.59
Apple	173.49	-0.18	198.23	124.17	0.51	30.43	2712304.74
Applied Materi.	138.48	-0.82	155.26	71.12	0.75	19.33	116258.65
Aptiv	92.89	-3.57	124.88	78.28	-	29.43	26271.55
ArcherDan	73.20	-0.27	98.28	69.92	2.22	10.20	39242.64
AT&T	14.64	-0.01	22.84	13.43	7.25	-13.08	104638.48
Autodesk	200.93	-6.13	233.69	179.61	-	52.76	42951.65
AutomData	241.77	-2.21	274.92	201.46	1.89	30.79	99602.47
AutoZone	2496.97	-0.63	2750	2165.05	-	20.14	45334.91
Avago Tech	819.61	-4.21	923.67	415.07	2.06	26.69	338280.08
BakerHu	33.21	0.07	37.58	21.88	2.00	85.61	33525.56
Bank of NY	41.20	-0.04	52.26	36.22	3.44	12.52	32085.84
BankAm	25.64	-0.30	38.60	25.56	3.28	7.70	203744.97
Baxter	37.06	0.10	58.23	36.66	2.99	-6.93	18767.36
BectonDick	260.16	0.44	287.32	215.90	1.32	49.19	75474.65
BerkshHat	520439.9	-1235.10	566569.97	393012.25	-	9.15	299419.48
Biogen	256.79	-0.38	319.76	248.41	-	14.64	37188.46
BlackRock	634.99	-1.54	785.65	503.12	2.98	19.39	94805.68
Boeing	185.95	-0.78	243.10	124.17	-	-25.92	111866.31
Booking Holdings	3009.92	-36.55	3251.71	1616.85	-	27.60	107430.53
Bristol-Myers	55.89	-0.27	81.44	55.83	3.85	15.54	116759.96
Broadcom	819.61	-4.21	923.67	415.07	2.06	26.69	338280.08
Cadence Design	232.86	-2.19	248.16	138.76	-	74.68	63289.02
CapOne	91.44	-1.17	120.94	83.93	2.51	7.28	34879.01
CardinalHlth	89.52	0.61	95.45	66.92	2.12	93.60	22053.61
Carnival	13.17	0.08	19.55	6.11	-	-4.86	14743.09
Caterpillar	261.10	-3.93	293.88	172.71	1.76	17.00	133187.11
Centene Corp	68.33	-0.65	87.84	60.83	-	14.64	36999.27
CharlesSch	50.44	-0.97	86.63	45.00	1.78	15.33	89289.88
Charter Comms	430.37	-2.48	457.66	297.66	-	15.11	64413.13
Chevron Corp	163.69	0.65	189.68	149.74	3.42	10.85	305649.37
Chipotle Mexic.	1848.34	-9.66	2175.01	1344.05	-	48.29	50991.15
Chubb	209.24	1.57	231.37	181.32	1.53	15.58	85942.19
Cigna	283.50	-1.58	340.11	240.50	1.59	13.57	83910.37
Cintas Corp	480.06	-3.89	524.76	370.93	0.94	37.67	49165.13
Cisco♦	52.67	-0.79	58.19	38.61	2.76	18.15	213549.09
Citigroup	39.42	-0.40	52.74	39.14	4.95	6.53	76731.22
CME Grp	205.00	1.76	209.31	166.55	4.06	26.20	73738.5
Coca-Cola	53.36	-1.69	64.99	53.28	3.23	23.15	230725.42
Cognizant	67.23	-0.31	72.71	51.33	1.59	16.42	33954.94
ColgtPlm	69.55	-1.01	82.09	67.84	2.60	40.62	57496.4
Comcast	42.91	-0.57	47.46	28.39	2.50	28.21	176583.62
ConocPhil	113.13	-0.20	138.49	91.53	3.29	11.34	135475.95
Constellation	242.93	-6.44	273.65	208.12	1.33	-169.60	44528.15
Corning	29.54	-0.53	37.10	29.16	3.56	41.74	25197.09
Corteva	49.51	-0.94	68.43	48.68	1.16	32.97	35143.47
Corteva	49.51	-0.94	68.43	48.68	1.16	32.97	35143.47
Costco	565.71	-6.09	576.19	447.90	0.65	42.71	250666.1
CrownCstl	88.78	-0.49	151.89	87.97	6.64	23.62	38501.98
CSX	30.28	-0.57	34.38	25.80	1.33	15.99	60751.67
CVS	68.96	-0.02	104.83	64.62	3.20	32.92	88572.15
Danaher	213.88	-2.20	251.44	196.11	0.47	26.25	157915.06
Deere	374.56	-2.44	450.00	345.55	1.22	11.74	107873.5
Delta	36.11	0.05	49.81	28.21	-	8.10	23235.18
Devon Energy	42.99	-0.37	78.82	42.73	10.03	6.14	27540.49
Digital Realty	116.38	-1.18	133.39	85.76	4.01	95.81	35229.31
DiscFinServ	86.21	-1.15	122.50	84.43	2.77	6.23	21546.77
Disney	79.19	-0.13	118.18	78.73	-	67.31	144900.18
Dollar General	106.94	-0.10	261.59	102.47	2.01	11.59	23469.72
DominRes	40.34	-1.63	70.80	40.30	6.33	15.62	33755.42
DukeEner	84.89	-1.23	106.43	83.38	4.53	19.01	65425.36
DuPont	73.34	-0.34	78.74	50.20	1.80	37.77	33667.49
Eaton	203.90	-5.45	240.44	132.02	1.57	31.49	81354.11
eBay	42.34	-0.60	50.75	35.92	2.12	18.68	22531.54
Ecolab	167.60	-2.02	191.41	131.04	1.20	42.63	47770.26
Edwards Lifesc.	71.29	0.02	94.87	67.13	-	32.98	43338.35
Elevance	438.21	0.26	549.52	412.00	1.20	17.06	103263.23
Eli Lilly	539.10	7.64	601.84	302.14	0.75	78.50	511765.03
Emerson	93.75	-0.91	100.62	76.08	2.12	17.61	53804.35
EOG Res	118.76	-0.60	150.88	98.52	2.54	8.37	69149.3
Equinix	713.98	-1.95	821.63	494.89	1.74	86.20	66803.49
EquityResTP	58.17	0.12	69.45	54.60	4.23	28.59	22843.36
Exelon	37.01	-0.40	44.37	35.19	3.61	18.08	36833.06
ExxonMb	109.15	-2.35	120.70	95.66	3.16	9.13	436948.49
Fedex	257.81	-2.24	270.95	148.93	1.75	16.40	64818.71
Fidelity NIS	53.80	-0.51	85.18	48.57	3.52	-1.43	31871.68
Fiserv	114.23	2.00	122.39	87.03	-	29.56	71750.87
FordMtr	11.78	-0.21	15.42	10.90	4.87	11.96	46311.58
Franklin	23.44	-0.30	32.88	20.24	4.86	15.31	11693.55
GenDyn	216.70	-1.32	256.86	202.35	2.28	18.60	59166.96
GenElectric	107.92	-0.94	117.96	49.21	0.21	12.21	117452.33
GenMills	62.85	-0.26	90.89	62.23	3.37	15.97	36530.49
GenMotors	30.24	-0.80	43.63	30.06	1.14	4.42	41607.38
GileadSci	74.42	-0.32	89.74	63.96	3.80	17.89	92728.39
GoldmSchs	305.67	-2.94	389.58	287.75	3.13	13.60	100768.91
Halliburton	38.18	-0.10	43.15	27.84	1.40	14.73	34302
HCA Hold	242.83	-0.53	304.86	178.32	0.91	12.54	66046.85
Hew-Pack	26.03	-0.02	33.90	24.08	3.81	10.08	25719.69
Hilton Worldwi.	148.57	-2.43	157.14	116.59	0.39	32.57	38853.07
HiltonWwde	148.57	-2.43	157.14	116.59	0.39	32.57	38853.07
HomeDep	291.00	-1.39	347.25	267.87	2.59	19.22	291019.3
Honywell	179.26	-3.24	220.96	169.22	2.17	23.20	119021.73
HumanaInc♦	488.01	2.23	571.30	423.29	0.66	19.00	60467.73
IBM	140.34	-0.73	153.21	115.55	4.50	62.44	127848.16
IDEXX Laborato.	423.95	-9.26	564.74	317.06	-	47.01	35187.85
IllinoisTool	231.49	-0.58	264.19	180.46	2.16	23.96	70000.34
Illumina	136.26	-2.06	248.87	127.37	-	-5.35	21569.96
Intcntl Exch	108.84	-0.19	118.79	88.60	1.41	37.81	60983.2
Intel	35.78	-0.16	40.07	24.59	3.26	-162.63	149825.7
Intuit	512.97	-4.49	558.64	352.63	0.57	64.47	143785.49
John&John	156.58	1.06	181.04	150.11	2.80	33.21	406946.66
JohnsonCn	51.24	-0.92	70.43	49.19	2.67	17.98	34859.6
JPMrgnCh	141.32	-0.98	159.38	101.28	2.71	9.50	410699.6
Kimb-Clark	119.00	-2.02	147.87	108.74	3.76	25.65	40244.61
KinderM	16.02	-0.02	19.36	15.89	6.66	15.09	35684.07
KLA Corp	457.69	-3.36	520.19	250.20	1.09	19.82	62393.37
Kraft Heinz	32.67	-0.62	42.80	32.42	4.68	13.34	40122.24
Kroger	44.42	-0.52	50.41	41.82	2.21	20.98	31952.01
LasVegasSd	43.95	-0.27	65.58	33.38	-	656.46	33597.45
LibertyGbl	16.15	-0.11	21.89	15.22	-	-2.32	2766.31
Lilly (E)	539.10	7.64	601.84	302.14	0.75	78.50	511765.03
Linde	369.61	-9.00	393.67	266.22	1.27	33.78	180349.72
Lockheed	397.20	-4.13	508.10	388.10	2.84	15.22	100027.46
Lowes	198.40	-1.19	237.21	176.50	2.02	20.32	114499.66
Lyondell	91.01	-2.49	102.05	75.24	5.07	14.71	29505.19
Marathon Ptl	141.59	-0.30	159.50	101.64	1.91	5.43	56613.92
Marsh&M	191.20	0.79	199.20	148.14	1.18	30.38	94443.95
MasterCard	392.04	-1.15	418.60	276.87	0.52	38.42	366497.77
McDonald's	254.73	-1.08	299.35	232.08	2.23	24.55	185637.04
McKesson	445.88	3.85	448.05	331.75	0.46	17.38	60149.94
Medtronic♦	75.95	-0.32	92.02	75.77	3.40	29.65	101049.11
Merck	103.00	0.83	119.65	87.12	2.67	88.27	261364.68
Meta	300.79	-4.79	326.20	88.09	-	36.65	668530.6
Metlife	59.57	-0.43	77.36	48.95	3.24	144.84	44797.98
Microsoft	316.58	-2.38	366.78	213.43	0.80	34.19	2352090.17
Mnstr Bvrg	51.18	-1.15	60.47	42.81	-	39.49	53613.66
MondelezInt	66.82	-1.86	78.59	54.95	2.20	23.21	90908.43
Monsanto	10.07	0.02	11.13	9.56	-	51.84	251.75
MorganStly	78.29	-0.80	100.99	74.67	3.79	14.39	129726.07
Netflix	369.36	-7.54	485.00	211.73	-	41.08	163683.79
NextEraE	48.57	-2.05	88.61	48.24	3.51	12.54	98291.79
Nike	95.50	-0.39	130.22	85.07	1.36	30.14	116989.7
NorfolkS	189.26	-3.71	261.71	186.82	2.62	17.81	42963.78
Northrop	421.25	-1.04	556.27	416.71	1.60	14.61	63735
NXP	193.04	-5.15	225.57	132.08	1.84	19.09	49766.12
Occid Pet	59.34	-0.70	76.11	55.51	1.00	10.48	52496.76
Oracle	107.15	0.07	127.54	61.65	1.29	33.13	293524.14
Pepsico	162.25	-6.67	196.88	160.98	2.78	29.71	223343.32
Perrigo	30.60	0.44	41.44	29.82	3.33	-76.18	4143.14
Pfizer	33.16	-0.15	54.93	31.77	4.67	9.22	187244.86
Phillips66	108.86	-1.63	125.19	88.64	3.55	4.91	48474.04
PhilMorris	91.50	0.17	105.62	84.00	5.31	18.51	142039.59
PNCFin	119.23	-0.87	170.28	110.31	4.81	8.55	47482.58
PPG Inds	130.66	-2.56	152.89	107.40	1.82	24.53	30772.13
ProctGmbl	144.79	-1.18	158.38	122.18	2.43	25.66	341314.36
Prudntl	90.75	-0.45	110.96	75.37	5.16	17.51	32940.44
PublStor	257.86	-1.19	316.48	254.87	3.71	11.67	45339.39
Qualcomm	108.96	-0.89	139.94	101.47	2.68	14.91	119856
Raytheon	69.47	-0.66	108.84	69.23	3.08	19.27	101107.35
Regen Pharm	823.08	8.09	847.50	668.00	-	22.75	89352.51
S&P Global	359.19	-3.09	428.65	279.32	0.93	52.90	114295.56
Salesforce	199.25	-2.62	238.22	126.34	-	131.77	193870.25
Schlmbrg	55.76	-0.08	62.78	39.13	1.46	21.35	79238.23
Sempra Energy♦	65.79	-0.70	84.13	63.75	3.39	17.44	20701.06
Shrwin-Will	253.20	-3.27	283.80	195.24	0.91	29.38	65108.74
SimonProp	103.64	-0.80	129.95	90.77	6.64	16.47	33910.08
SouthCpr	71.79	-1.55	87.59	45.17	4.33	20.85	55501.43
Starbucks	91.88	0.73	115.48	82.43	2.17	29.29	105239.35
StateSt	63.47	-0.99	94.74	58.62	3.80	8.98	20224.1
Stryker	265.25	-0.95	306.93	203.23	1.06	39.17	100736.19
Sychrony Fin	28.61	-0.44	40.89	26.59	3.08	5.44	11962.13
T-MobileUS	137.27	-0.79	154.38	124.92	-	28.59	161492.28
Target	105.16	-1.46	180.46	104.63	3.88	15.26	48542.43
TE Connect	120.41	-3.00	146.60	104.76	1.80	19.49	37801.35
Tesla Mtrs	258.78	-2.38	299.29	101.81	-	77.08	821366.29
TexasInstr	155.28	-2.69	188.12	145.97	3.00	19.49	140989.01
TheTrvelers	163.44	0.94	194.45	155.72	2.22	18.12	37418.33
ThrmoFshr	495.40	-7.05	609.85	475.77	0.25	35.40	191199.52
TJX Cos	87.83	-0.21	93.78	62.25	1.31	27.25	100484.6
Truist Financial Corp	26.95	-0.22	53.34	25.56	7.38	6.51	35895.16
Twitter	53.70	0.35	60.16	31.30	-	-402.23	41093.72
UnionPac	199.88	-2.39	240.48	183.69	2.49	19.09	121818.17
UPS	153.02	-0.70	197.80	150.54	3.93	13.88	110675.66
USBancorp	31.15	-0.09	49.93	27.27	5.90	9.07	47751.87
UtdHlthcre	512.11	1.49	558.10	445.68	1.28	23.97	474370.12
ValeroEngy	127.12	-1.56	160.16	104.18	3.01	4.58	44888.49
Verizon	31.41	-0.14	44.73	31.25	7.95	6.57	132027.88
VertexPharm	352.45	-0.52	367.00	282.21	-	28.48	90965.52
VF Cp	16.27	-0.33	34.90	15.87	9.47	56.69	6324.94
Visa Inc	232.37	1.15	250.58	174.60	0.71	30.83	373369.24
Walgreen	22.12	-0.18	42.29	20.58	8.52	-5.87	19091.03
WalMartSto	159.62	-1.38	165.85	128.07	1.34	32.48	429627.42
Walt Disney	79.19	-0.13	118.18	78.73	-	67.31	144900.18
Waste Manage.	154.30	0.34	173.71	148.31	1.67	29.02	62500.67
WellsFargo	38.86	-0.11	48.84	35.25	2.95	10.26	70842.87
Williams Cos	33.32	0.39	35.46	27.80	5.01	15.62	40531.16
Workday	205.58	-3.79	252.72	128.72	-	-453.20	42555.06
Yum!Brnds	122.78	-0.75	143.25	103.97	1.83	25.93	34404.34
Zoetis	170.71	-0.28	194.99	124.15	0.78	37.58	78580.7
Zoom	64.43	-1.63	89.67	60.45	-	145.06	16384.06
Venezuela (VEF)							
Bco de Vnzla	4.60	-0.40	5.00	1.10	149.29	-	483.90
Bco Provncl	13.99	0.49	79400	6.80	-	6.60	151.32

Closing prices and highs & lows are in traded currency (with variations for that country indicated by stock), market capitalisation is in USD. Highs & lows are based on intraday trading over a rolling 52 week period.
♦ ex-dividend
■ ex-capital redistribution
price at time of suspension

FT 500: TOP 20

	Close price	Prev price	Day change	Day change %	Week change	Week change %	Month change %
MediaTek	786.00	780.00	6.00	0.77	43.00	6.6	10.55
Nike	95.50	95.89	-0.39	-0.41	6.26	6.5	-4.84
Tesco	280.40	270.70	9.70	3.58	6.10	6.0	9.52
Walgreen	22.12	22.29	-0.18	-0.79	1.39	5.8	-2.77
SHK Props	83.60	82.95	0.65	0.78	3.55	5.3	-7.46
Tesla Mtrs	258.78	261.16	-2.38	-0.91	14.78	5.0	0.89
SK Hynix	120200.00	115400.00	4800.00	4.16	700.00	4.8	-3.19
Bradesco	12.82	12.60	0.22	1.75	0.33	4.5	-1.23
L&T	3096.05	3027.75	68.30	2.26	62.70	4.4	14.20
Pfizer	33.16	33.31	-0.15	-0.44	1.22	3.3	-6.28
RELX	2852.00	2818.00	34.00	1.21	54.00	3.2	9.40
MollerMrsk	12985.00	12740.00	245.00	1.92	135.00	3.0	1.21
AIA	65.95	65.40	0.55	0.84	1.35	3.0	-8.34
Illumina	136.26	138.32	-2.06	-1.49	5.97	3.0	-14.51
Cielo	3.50	3.43	0.07	2.04	0.03	2.9	-6.67
Telia Co	22.76	22.60	0.16	0.71	0.48	2.9	3.27
ItauHldFin	23.30	23.03	0.27	1.17	0.36	2.8	1.48
FEMSA UBD	194.53	195.34	-0.81	-0.41	5.96	2.7	2.33
Vivendi	8.33	8.45	-0.11	-1.35	0.31	2.4	-0.95
Accenture	307.61	309.39	-1.79	-0.58	8.62	2.3	-5.72

Based on the FT Global 500 companies in local currency

FT 500: BOTTOM 20

	Close price	Prev price	Day change	Day change %	Week change	Week change %	Month change %
CntJpRwy	3394.00	3342.00	52.00	1.56	-15553.00	-82.0	-9.46
Denso	2292.00	2245.00	47.00	2.09	-7895.00	-77.4	-10.38
HondaMtr	1601.50	1554.50	47.00	3.02	-3701.50	-69.5	-0.42
Murata Mfg	2683.50	2657.00	26.50	1.00	-5487.00	-67.0	-3.47
NextEraE	48.57	50.62	-2.05	-4.05	-6.46	-14.9	-26.60
ValeroEngy	127.12	128.67	-1.56	-1.21	-18.51	-13.6	-4.42
Danaher	213.88	216.07	-2.20	-1.02	-31.12	-13.5	-7.56
Devon Energy	42.99	43.35	-0.37	-0.84	-5.46	-11.9	-19.63
Phillips66	108.86	110.49	-1.63	-1.48	-12.89	-11.8	-6.75
Midea	0.34	0.38	-0.04	-10.67	0.00	-10.7	-5.63
SampoA	37.03	36.62	0.41	1.12	-4.64	-10.3	0.66
Panasonic	1571.50	1569.50	2.00	0.13	-176.50	-10.0	-9.49
Nissan Mt	606.00	590.60	15.40	2.61	-82.40	-10.0	-5.23
Occid Pet	59.34	60.04	-0.70	-1.17	-5.84	-9.9	-10.36
EastJpRwy	7974.00	7899.00	75.00	0.95	-950.00	-9.9	-3.15
Hitachi	8880.00	8677.00	203.00	2.34	-1148.00	-9.6	-11.47
Renault	35.13	35.62	-0.49	-1.36	-3.21	-9.5	0.98
Nppn Stl	3329.00	3236.00	93.00	2.87	-440.00	-9.4	-8.46
BakerHu	33.21	33.14	0.07	0.20	-3.45	-9.3	-10.47
Fuji Hvy Ind	2695.50	2637.00	58.50	2.22	-320.00	-8.8	-7.38

Based on the FT Global 500 companies in local currency

BONDS: HIGH YIELD & EMERGING MARKET

Oct 05	Red date	Coupon	S*	M*	F*	Bid price	Bid yield	Day's chge yield	Mth's chge yield	Spread vs US
High Yield US$										
HCA Inc.	04/24	8.36	BB-	Ba2	BB	113.75	4.24	0.00	0.12	-
High Yield Euro										
Aldesa Financial Services S.A.	04/21	7.25	-	-	B	71.10	28.23	0.00	0.64	25.98
Emerging US$										
Peru	03/19	7.13	BBB+	A3	BBB+	104.40	2.60	-	-	0.34
Colombia	01/26	4.50	-	Baa2	BBB-	109.50	2.33	0.16	0.52	1.28
Brazil	04/26	6.00	-	Ba2	BB-	115.15	2.78	-0.01	0.65	1.73
Poland	04/26	3.25	-	A2	A-	111.22	0.98	0.03	0.16	-0.07
Mexico	05/26	11.50	-	Baa1	BBB-	149.00	1.61	0.00	-0.12	0.56
Turkey	03/27	6.00	-	Ba2	BB+	101.26	5.82	0.00	0.17	3.07
Turkey	03/27	6.00	-	B2	BB-	102.88	5.43	0.14	0.83	4.38
Peru	08/27	4.13	BBB+	A3	BBB+	103.50	3.66	0.01	-0.02	0.80
Russia	06/28	12.75	-	Baa3	BBB	168.12	2.48	0.07	0.05	-
Brazil	02/47	5.63	-	Ba2	BB-	101.48	5.52	0.08	0.80	-
Emerging Euro										
Brazil	04/21	2.88	BB-	Ba2	BB-	103.09	0.05	0.01	-0.09	-1.19
Mexico	04/23	2.75	BBB+	A3	BBB+	107.76	0.76	0.00	-0.07	-1.56
Mexico	04/23	2.75	-	Baa1	BBB-	106.48	-0.26	-	-	-0.36
Bulgaria	03/28	3.00	BBB-	Baa2	BBB	117.04	1.00	0.02	-0.15	-1.42

Interactive Data Pricing and Reference Data LLC, an ICE Data Services company. US $ denominated bonds NY close; all other London close. *S - Standard & Poor's, M - Moody's, F - Fitch.

BONDS: GLOBAL INVESTMENT GRADE

Oct 05	Red date	Coupon	S*	M*	F*	Bid price	Bid yield	Day's chge yield	Mth's chge yield	Spread vs US
US$										
FleetBoston Financial Corp.	01/28	6.88	BBB+	Baa1	A-	129.00	2.54	-0.01	-0.05	-
The Goldman Sachs Group, Inc.	02/28	5.00	BBB+	A3	A	117.21	2.47	0.00	0.32	-
NationsBank Corp.	03/28	6.80	BBB+	Baa1	A-	127.69	2.72	-0.01	0.06	-
GTE LLC	04/28	6.94	BBB+	Baa2	A-	128.27	2.80	0.00	-0.11	-
United Utilities PLC	08/28	6.88	BBB	Baa1	A-	130.43	2.62	-0.07	-0.22	-
Barclays Bank plc	01/29	4.50	A	A1	A+	96.46	5.02	0.00	0.02	-
Euro										
Electricite de France (EDF)	04/30	4.63	A-	A3	A-	137.45	0.82	-0.01	0.10	-
The Goldman Sachs Group, Inc.	02/31	3.00	BBB+	A3	A	124.42	0.68	0.00	-0.11	-
The Goldman Sachs Group, Inc.	02/31	3.00	BBB+	A3	A	121.70	0.93	0.00	0.02	-
Finland	04/31	0.75	AA+	Aa1	AA+	111.08	-0.27	0.00	-0.05	-0.87
Yen										
Mexico	06/26	1.09	-	Baa1	BBB-	98.73	1.34	-0.02	-0.14	0.27
£ Sterling										
innogy Fin B.V.	06/30	6.25	BBB	Baa2	A-	128.68	3.20	0.00	-0.01	0.40
innogy Fin B.V.	06/30	6.25	BBB	Baa2	A-	137.45	2.19	-0.03	0.02	-

Interactive Data Pricing and Reference Data LLC, an ICE Data Services company. US $ denominated bonds NY close; all other London close. *S - Standard & Poor's, M - Moody's, F - Fitch.

INTEREST RATES: OFFICIAL

Oct 05	Rate	Current	Since	Last
US	Fed Funds	5.25-5.50	26-07-2023	5.00-5.25
US	Prime	8.50	26-01-2023	8.25
US	Discount	5.50	01-08-2023	5.25
Euro	Repo	4.0	14-09-2023	3.438
UK	Repo	5.25	03-08-2023	5.00
Japan	O'night Call	0.00-0.10	01-02-2016	0.00
Switzerland	Libor Target	-1.25-0.25	15-01-2015	-0.75--0.25

INTEREST RATES: MARKET

Oct 05 (Libor: Oct 04)	Over night	Change Day	Change Week	Change Month	One month	Three month	Six month	One year
US$ Libor	5.06157	0.010	0.000	0.003	5.44488	5.68401	5.92158	6.04143
Euro Libor	-0.64957	-0.064	0.000	0.001	-0.61943	-0.58057	-0.55600	-0.48571
£ Libor	0.18063	-0.005	0.000	0.001	4.20130	5.41580	4.74470	0.81363
Swiss Fr Libor				-0.002	-0.77540	-0.75300	-0.70280	-0.55320
Yen Libor				0.000	-0.06005	-0.02617	0.07165	0.04867
Euro Euribor				-0.038	3.83400	3.96200	4.13000	4.21200
Sterling CDs				0.000	0.50000	0.63000	0.78500	
US$ CDs				0.060	5.46000	5.68000	5.87000	
Euro CDs				0.000	3.93000	3.89000	4.01000	

Oct 05	Short term		7 Days notice		One month		Three month		Six month		One year	
Euro	3.63	3.93	3.69	3.99	3.78	4.08	3.74	4.04	3.86	4.16	3.86	4.16
Sterling					0.45	0.55	0.58	0.68	0.71	0.86	0.90	1.05
US Dollar	5.14	5.34	5.16	5.36	5.36	5.56	5.58	5.78	5.77	5.97	5.96	6.16
Japanese Yen	-0.30	-0.10	-0.30	-0.10	-0.25	0.05	-0.15	0.05	-0.05	0.15	0.00	0.20

Libor rates come from ICE (see www.theice.com) and are fixed at 11am UK time. Other data sources: US $, Euro & CDs: Tullett Prebon; SDR, US Discount: IMF; EONIA: ECB; Swiss Libor: SNB; EURONIA, RONIA & SONIA: WMBA.

BOND INDICES

	Index	Day's change	Month's change	Year change	Return 1 month	Return 1 year
Markit IBoxx						
ABF Pan-Asia unhedged	198.37	-0.93	-1.42	-2.63	-3.32	4.66
Corporates(£)	324.18	-0.30	-1.07	0.33	-0.43	6.12
Corporates(€)	211.13	-0.23	-0.58	1.84	-1.11	1.60
Eurozone Sov(€)	205.63	0.03	-0.85	-0.91	-2.69	-4.80
Gilts(£)	253.69	0.03	-1.42	-5.89	-1.37	-4.00
Overall(£)	266.75	-0.05	-1.29	-4.21	-1.06	-1.63
Overall(€)	203.71	-0.04	-0.76	-0.24	-2.20	-3.09
FTSE						
Sterling Corporate (£)	-	-	-	-	-	-
Euro Corporate (€)	104.47	-0.05	-	-	0.54	-1.73
Euro Emerging Mkts (€)	768.11	10.58	-	-	4.15	40.83
Eurozone Govt Bond	110.04	-0.19	-	-	-0.34	-0.64

CREDIT INDICES	Index	Day's change	Week's change	Month's change	Series high	Series low
Markit iTraxx						
Crossover 5Y	461.22	7.38	28.04	-	463.83	409.66
Europe 5Y	87.78	1.89	7.45	-	88.11	75.15
Japan 5Y	76.41	-0.50	3.72	-	78.83	70.54
Senior Financials 5Y	101.00	2.51	9.49	-	101.03	87.01
Markit CDX						
Emerging Markets 5Y	235.67	-6.03	10.82	-	241.70	213.47
Nth Amer High Yld 5Y	500.62	-5.55	24.15	-	506.17	473.30
Nth Amer Inv Grade 5Y	76.82	-1.14	2.80	-	77.96	70.16

Websites: markit.com, ftse.com. All indices shown are unhedged. Currencies are shown in brackets after the index names.

VOLATILITY INDICES

	Oct 05	Day Chng	Prev	52 wk high	52 wk low
VIX	19.38	0.80	18.58	34.53	12.68
VXD	16.40	1.03	15.37	34.44	3.10
VXN	23.50	0.82	22.68	40.18	5.85
VDAX	18.58	-0.49	19.07	93.30	-

† CBOE. VIX: S&P 500 index Options Volatility, VXD: DJIA Index Options Volatility, VXN: NASDAQ Index Options Volatility.
‡ Deutsche Borse. VDAX: DAX Index Options Volatility.

BONDS: BENCHMARK GOVERNMENT

	Red Date	Coupon	Bid Price	Bid Yield	Day chg yield	Wk chg yield	Month chg yld	Year chg yld
Australia	-	-	-	-	-	-	-	-
	05/32	1.25	77.02	4.49	0.04	0.12	0.05	0.56
	02/50	1.00	87.61	2.30	0.05	0.10	0.05	0.31
Austria	02/29	0.50	86.21	3.34	0.04	0.12	0.10	0.95
	02/47	1.50	63.79	3.88	0.09	0.24	0.19	1.16
Belgium	06/27	0.80	91.76	3.19	0.00	0.03	0.04	1.16
	06/47	1.60	62.69	4.09	0.08	0.21	0.19	1.22
Canada	03/25	1.25	94.87	5.07	0.10	0.03	0.10	1.38
	06/30	1.25	82.36	4.32	0.21	0.18	0.21	1.17
	12/48	2.75	79.16	4.06	0.19	0.19	0.19	0.90
Denmark	11/29	0.50	85.94	3.06	0.04	0.11	0.10	0.77
	11/39	4.50	113.92	3.37	0.07	0.20	0.18	0.92
Finland	09/24	0.00	96.55	3.78	0.02	0.09	0.07	2.00
	09/29	0.50	84.87	3.35	0.05	0.16	0.12	0.99
France	05/28	0.75	89.52	3.22	0.01	0.08	0.07	1.10
	05/48	2.00	69.06	4.00	0.08	0.20	0.19	1.20
Germany	08/29	0.00	85.04	2.80	0.02	0.10	0.09	1.03
	08/48	1.25	67.54	3.15	0.08	0.20	0.18	1.26
Greece	-	-	-	-	-	-	-	-
	01/28	3.75	99.51	3.87	0.04	0.12	0.04	-0.28
Ireland	-	-	-	-	-	-	-	-
	05/26	1.00	94.60	3.19	-0.01	-0.02	0.01	1.31
	02/45	2.00	73.15	3.87	0.07	0.19	0.16	1.07
Italy	02/25	0.35	95.39	3.96	0.01	0.07	0.03	1.15
	05/30	0.40	88.04	2.36	0.10	0.26	0.17	0.40
	03/48	3.45	75.82	5.21	0.13	0.22	0.19	1.08
Japan	04/25	0.05	99.93	0.10	0.00	0.02	0.00	0.05
	12/29	0.10	97.93	0.44	-0.01	0.03	0.01	0.23
	12/49	0.40	73.65	1.64	0.01	0.05	0.03	0.36
Netherlands	07/27	0.75	91.85	3.07	0.01	0.04	0.07	1.18
	01/47	2.75	88.89	3.45	0.08	0.21	0.19	1.20
New Zealand	05/31	1.50	75.84	5.41	0.05	0.20	0.11	1.16
	09/40	2.50	111.62	3.26	0.08	0.15	0.07	0.70
Norway	08/30	1.38	83.39	4.21	0.03	0.16	0.18	0.98
Poland	-	-	-	-	-	-	-	-
	07/27	2.50	91.17	5.11	-0.03	-0.02	-0.04	-2.25
	04/47	4.00	78.01	5.72	0.00	0.18	0.09	-1.00
Portugal	04/27	4.13	102.84	3.25	0.02	0.06	0.05	0.99
Spain	-	-	-	-	-	-	-	-
	10/29	0.60	83.58	3.67	0.04	0.13	0.10	0.97
	10/46	2.90	76.32	4.58	0.10	0.20	0.19	1.21
Sweden	06/30	0.13	111.16	1.37	0.05	0.13	0.11	1.49
	03/39	3.50	104.23	3.15	0.09	0.14	0.15	1.09
Switzerland	04/28	4.00	112.78	1.08	0.00	0.04	0.02	0.26
	06/29	0.00	94.08	1.07	0.00	0.02	0.02	0.21
United Kingdom	-	-	-	-	-	-	-	-
	07/27	1.25	88.83	4.48	0.04	0.24	0.13	0.28
	07/47	1.50	51.41	5.02	0.03	0.23	0.16	1.11
United States	-	-	-	-	-	-	-	-
	03/25	0.50	93.11	5.37	0.03	0.06	0.09	1.24
	02/30	1.50	81.89	4.84	0.10	0.21	0.21	1.13
	02/50	0.25	55.85	2.56	0.12	0.19	0.20	0.81

Interactive Data Pricing and Reference Data LLC, an ICE Data Services company.

GILTS: UK CASH MARKET

Oct 05	Price £	Red Yield	Change in Yield Day	Change in Yield Week	Change in Yield Month	Change in Yield Year	52 Week High	52 Week Low	Amnt £m
	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-
Tr 0.125pc '24	98.48	4.97	-0.80	-1.39	-2.17	24.25	98.48	94.69	35.55
Tr 2pc '25	95.14	4.68	-1.68	-1.89	-7.14	14.43	97.82	92.80	39.93
Tr 0.125pc '26	90.61	4.44	-1.77	-2.20	-6.13	6.22	92.38	86.54	35.32
Tr 1.25pc '27	89.08	4.41	-1.78	-1.34	-4.34	5.00	93.30	85.65	40.99
Tr 0.5pc '29	81.47	4.45	-1.55	-0.89	-3.05	9.34	87.71	78.21	28.92
Tr 1pc '32	75.98	4.49	-1.32	0.00	0.45	12.25	110.34	74.53	35.96
Tr 4.25pc '36	95.82	4.70	-1.26	0.00	2.17	11.90	110.66	94.67	31.68
Tr 4.5pc '42	94.50	4.95	-0.60	1.02	3.56	15.38	117.12	93.79	28.35
Tr 3.75pc '52	81.27	4.98	-0.60	0.81	4.40	19.14	110.80	80.73	25.11
Tr 4pc '60	84.94	4.89	-0.61	1.03	5.16	22.25	122.75	84.41	25.13

Gilts benchmarks & non-rump undated stocks. Closing mid-price in pounds per £100 nominal of stock.

GILTS: UK FTSE ACTUARIES INDICES

Price Indices Fixed Coupon	Oct 05	Day's chg %	Total Return	Return 1 month	Return 1 year	Yield
1 Up to 5 Years	81.00	0.18	2364.11	0.95	3.10	4.56
2 5 - 10 Years	141.20	0.43	3045.75	0.55	1.46	4.44
3 10 - 15 Years	143.96	0.62	3411.29	-0.61	-1.14	4.72
4 5 - 15 Years	140.67	0.48	3130.03	0.23	0.65	4.54
5 Over 15 Years	182.23	0.49	3220.61	-2.88	-8.24	4.91
7 All stocks	125.97	0.37	2868.94	-0.53	-1.33	4.78

Index Linked	Oct 05	Day's chg %	Month chg %	Year's chg %	Total Return	Return 1 month	Return 1 year
1 Up to 5 Years	329.34	0.18	0.73	4.36	2809.06	0.75	5.55
2 Over 5 years	478.02	0.62	-3.86	-5.93	3661.43	-3.77	-5.35
3 5-15 years	439.94	0.48	-0.87	3.51	3584.68	-0.81	4.45
4 Over 15 years	502.19	0.71	-5.87	-12.32	3727.68	-5.77	-11.95
5 All stocks	466.00	0.52	-2.86	-3.78	3643.56	-2.79	-3.10

Yield Indices	Oct 05	Oct 04	Yr ago		Oct 05	Oct 04	Yr ago
5 Yrs	4.38	4.45	4.09	20 Yrs	4.93	4.97	4.28
10 Yrs	4.58	4.64	4.13	45 Yrs	4.79	4.81	3.87
15 Yrs	4.82	4.87	4.24				

Real yield	inflation 0% Oct 05	inflation 0% Dur yrs	inflation 0% Previous	inflation 0% Yr ago	inflation 5% Oct 05	inflation 5% Dur yrs	inflation 5% Previous	inflation 5% Yr ago
Up to 5 yrs	1.16	2.51	1.23	0.37	0.83	2.53	0.89	-0.25
Over 5 yrs	1.39	18.61	1.42	0.62	1.36	18.66	1.39	0.59
5-15 yrs	1.01	9.40	1.06	0.56	0.92	9.42	0.97	0.46
Over 15 yrs	1.49	24.68	1.52	0.63	1.47	24.70	1.50	0.62
All stocks	1.38	15.00	1.41	0.62	1.34	15.08	1.37	0.58

See FTSE website for more details www.ftse.com/products/indices/gilts
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COMMODITIES

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Energy		Price*	Change
Crude Oil†	Nov	83.87	-0.35
Brent Crude Oil‡		84.16	-1.65
RBOB Gasoline†	Dec	2.21	0.01
Natural Gas†	Nov	3.03	0.07
Base Metals (♠ LME 3 Months)			
Aluminium		2232.00	-12.50
Aluminium Alloy		1580.00	55.00
Copper		7920.00	-1.00
Lead		2108.50	0.00
Nickel		18560.00	-90.00
Tin		24055.00	120.00
Zinc		2465.00	-20.00
Precious Metals (PM London Fix)			
Gold		1818.95	-3.50
Silver (US cents)		2110.50	5.00
Platinum		874.00	-7.00
Palladium		1177.00	-6.00
Bulk Commodities			
Iron Ore		118.03	-0.41
Baltic Dry Index		1827.00	49.00
Richards Bay ICE Futures		123.80	-1.60

Agricultural & Cattle Futures		Price*	Change
Corn♦	Dec	483.75	-2.25
Wheat♦	Dec	561.00	1.00
Soybeans♦	Nov	1266.25	-6.75
Soybeans Meal♦	Oct	366.10	-2.60
Cocoa (ICE Liffe)✠	Dec	2942.00	-23.00
Cocoa (ICE US)♥	Dec	3385.00	-46.00
Coffee(Robusta)✠	Nov	2375.00	-5.00
Coffee (Arabica)♥	Dec	146.90	0.55
White Sugar✠		696.00	4.80
Sugar 11♥		26.02	0.09
Cotton♥	Dec	87.06	0.05
Orange Juice♥	Nov	367.90	1.95
Live Cattle♣	Oct	182.23	0.10
Feeder Cattle♣	May	134.88	-
Lean Hogs♣	Oct	79.90	-0.08

	Oct 04	% Chg Month	% Chg Year
S&P GSCI Spt	572.92	-5.12	-11.88
DJ UBS Spot	101.50	-4.81	-12.86
TR/CC CRB TR	310.68	-2.66	3.13
LEBA EUA Carbon	58.91	-1.98	129.94
LEBA UK Power	1048.00	-37.43	-39.60

Sources: † NYMEX, ‡ ECX/ICE, ♦ CBOT, ✠ ICE Liffe, ♥ ICE Futures, ♣ CME, ♠ LME/London Metal Exchange.* Latest prices, $ unless otherwise stated.

BONDS: INDEX-LINKED

	Price Oct 04	Yield Oct 04	Yield Prev	Month return	Value stock	Market	No of stocks
Can 4.25%' 26	105.60	2.392	2.503	-0.07	5.25	65034.42	8
Fr 0.10%' 25	98.17	1.425	1.354	-0.11	12.79	238720.73	18
Swe 1.00%' 25	127.99	1.543	1.538	-0.06	35.93	227190.71	7
UK 0.125%' 26	98.04	0.933	0.863	-0.46	13.45	479979.90	31
	-	-	-	-	-	-	-
UK 2.00%' 35	234.29	1.077	1.032	-2.17	9.08	479979.90	31
US 0.625%' 26	94.71	3.047	3.062	-0.31	42.42	1597339.11	48
US 3.625%' 28	104.38	2.593	2.634	-0.55	16.78	1597339.11	48

Representative stocks from each major market Source: Merill Lynch Global Bond Indices † Local currencies. ‡ Total market value. In line with market convention, for UK Gilts inflation factor is applied to price, for other markets it is applied to par amount.

BONDS: TEN YEAR GOVT SPREADS

	Bid Yield	Spread vs Bund	Spread vs T-Bonds		Bid Yield	Spread vs Bund	Spread vs T-Bonds
Australia	4.49	1.69	-0.35	Netherlands	3.07	0.26	-1.77
Austria	3.34	0.54	-1.50	New Zealand	5.41	2.61	0.57
Canada	4.32	1.52	-0.52	Norway	4.21	1.40	-0.63
Denmark	3.06	0.25	-1.78	Portugal	3.25	0.45	-1.59
Finland	3.35	0.55	-1.49	Spain	3.67	0.86	-1.18
Germany	2.80	0.00	-2.04	Sweden	1.37	-1.44	-3.48
Italy	2.36	-0.44	-2.48	Switzerland	1.07	-1.73	-3.77
Japan	0.44	-2.37	-4.40	United States	4.84	2.04	0.00

Interactive Data Pricing and Reference Data LLC, an ICE Data Services company.

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Main Market

	Price	+/-Chg	52 Week High	52 Week Low	Yld	P/E	Vol 000s
Aerospace & Defence							
Avon Protection	604.00	11.00	1250	582.00	4.85	-10.19	42.9
BAE Sys	983.20	5.20	1065	702.20	2.46	17.97	2789.1
Chemring	265.50	6.50	332.50	253.95	1.58	18.44	342.2
Automobiles & Parts							
FordMtr $✠	11.78	-0.21	15.42	10.90	4.87	11.96	17081.0
Banks							
ANZ A$✠	25.09	0.17	26.08	22.39	6.01	10.53	5820.6
BcoSant	306.00	2.00	343.50	209.55	2.10	7.30	126.1
BnkGeorgia♦	3405	-110.00	3762	1899.6	6.76	3.24	52.2
BankIre Grp €	9.01	-0.01	11.03	6.93	-	10.19	133.3
BkNvaS C$✠	59.26	0.14	74.41	57.57	6.90	9.41	817.1
Barclays✠	152.52	-1.36	198.86	128.12	4.75	4.41	38644.1
CanImp C$✠	50.76	-0.18	65.24	50.03	6.60	10.53	464.7
HSBC✠	644.50	4.00	665.60	434.70	5.05	6.83	17849.2
LlydsBkg✠	42.17	-0.29	54.33	38.51	5.69	5.34	103381.4
NWG✠	222.50	-1.70	310.00	210.90	6.19	4.98	9733.2
PermTSB €	2.35	-0.04	2.81	1.18	-	-27.36	65.9
RylBkC C$✠	114.66	0.47	140.18	111.49	4.53	11.24	587.4
StandCh✠	749.40	5.80	799.40	515.60	1.89	9.80	4187.0
..7.375%Pf	99.75	-0.60	105.75	94.50	7.39	-	10.0
..8.25%Pf	109.25	1.25	114.50	101.36	7.55	-	485.6
TntoDom C$✠	78.98	-0.46	94.05	76.32	4.71	10.36	1320.6
Westpc A$✠	21.01	0.27	24.50	20.03	6.17	11.61	7617.3
Chemicals							
Elemntis	117.00	-1.00	130.00	87.70	-	396.61	707.2
Johnsn Mtthey	1559.5	-2.50	2370	22.00	4.49	19.67	300.9
Victrex	1375	-6.00	1953.15	1320	4.33	16.37	36.7
Construction & Materials							
Boot(H)	191.00	-1.00	255.70	190.50	2.88	10.21	25.0
GalfrdT	235.00	-10.00	249.00	144.11	2.00	52.22	342.7
MorgSdl	1906	-46.00	2150	1330	3.67	9.32	55.0
Tyman	269.00	0.50	324.00	182.40	2.97	10.63	160.2
Electronic & Electrical Equip							
Dialight	166.50	-0.50	340.00	156.55	-	545.90	6.8
Discoverie PLC	628.00	1.00	958.00	610.00	1.62	51.48	222.4
Halma	1938	25.50	2520.95	1870	0.91	28.06	935.2
Morgan Ad	238.00	-1.00	326.50	234.50	2.82	10.04	837.4
OxfordIn	1976	-79.00	2884.8	1700	0.86	26.99	242.0
Renishaw	3324	-	4296	3238	1.99	18.96	37.7
Spectris	3199	-34.00	3883.85	2654	2.17	10.52	343.2
TT Elect	170.00	-	212.03	123.40	3.82	23.61	76.8
XP Power	809.00	-108.00	2750	792.80	11.37	4.32	171.6
Financial General							
3i	2008	25.50	2107	1044.5	1.92	6.95	1495.3
abrdn	154.80	3.50	238.00	131.03	9.43	3.37	8089.3
Bridgepoint Grp Plc	184.60	0.20	263.40	164.80	-	11.54	600.5
CtyLonInv	375.00	10.00	475.00	322.00	8.80	8.80	6.3
CloseBrs	866.00	6.50	1139	790.00	6.93	6.47	154.6
CoinShares Intl Ltd SKr	42.50	-0.70	56.10	19.00	-	-0.07	42.9
Hargr Lans	758.40	6.20	1023.5	726.60	5.08	13.52	997.6
Indvardn SKr	282.50	2.40	305.70	216.30	2.42	-9.74	332.3
ICG	1329.5	17.00	1516	947.20	4.21	7.63	290.1
Investec	454.50	2.80	556.20	375.40	2.86	11.42	322.0
Jupiter	87.35	-3.35	158.30	82.20	19.58	3.25	700.9
Liontrust	573.50	9.00	1300	541.50	8.20	7.17	107.6
LSE Gp✠	8080	30.00	8893.86	7052	1.32	67.00	766.2
RathbnGrp	1602	18.00	2245	1553.28	4.62	12.39	76.2
Record	74.60	-1.30	98.90	66.00	3.08	20.49	24.9
S & U	2250	-35.00	2570	1940	4.00	10.62	1.1
Schroder	394.20	-0.50	507.00	348.00	29.43	1.82	1034.2
Shires Income	225.00	-2.00	275.00	213.00	5.96	3.14	27.6
StJmsPl	798.60	6.20	1301.5	783.00	7.67	15.21	735.1
TP ICAP	157.40	1.10	210.20	140.60	3.81	224.86	472.6
Vanqus	115.60	-0.60	248.40	102.60	-	2.16	435.0
Food & Beverages							
AngloEst	712.00	-3.00	886.20	650.50	0.10	6.52	4.4
AscBrFd✠	1990	13.00	2167	1232.5	2.20	20.88	833.6
Barr(AG)	495.00	-1.00	565.60	426.50	-	17.58	136.9
Britvic	835.00	-4.50	950.00	700.00	2.90	18.93	374.0
CarrsGroup	129.00	0.50	152.02	91.60	3.88	15.93	41.6
Coca-Cola HBC	2183	7.00	2582	1811	2.46	17.45	348.9
Cranswk	3450	-20.00	3666	2548	2.03	18.23	82.8
Diageo✠	3055.5	22.00	3881.5	2996.75	2.54	18.59	2994.2
Grncore	70.30	-0.15	94.05	60.15	-	14.06	386.1
HiltonFd	680.00	-4.00	799.00	495.42	3.29	14.20	80.2
Kerry €	77.83	-0.15	100.00	76.00	1.11	18.67	47.9
PremFds	116.20	0.20	139.00	91.04	0.86	12.10	331.9
Tate&Lyl	669.50	5.00	837.50	648.00	4.60	14.34	472.2
Unilever✠	4030.5	18.00	4868.64	3797.5	3.69	14.41	2301.6
..NV	-	-	-	-	-	-	-
Health Care Equip & Services							
GNStre kr	119.45	2.90	197.85	116.05	-	35.19	486.6
Smith & Nephew	965.20	-7.40	1316.75	959.20	2.83	21.90	1403.9
House, Leisure & Pers Goods							
BarrttDev	418.60	8.50	515.00	313.00	7.02	6.54	1745.3
Bellway	2182	52.00	2570	1590.5	5.38	6.56	154.0
Berkeley	4022	52.00	4549	3146	0.23	10.47	172.0
Burberry Gp	1836	19.50	2656	1791	2.31	15.80	1418.9
Cairn Homes	93.00	-0.40	102.00	72.50	2.40	19.10	294.5
GamesWk	9940	125.00	11850	5745	2.57	27.38	20.6
Gleeson	391.00	10.00	475.00	331.00	3.84	6.11	29.3
Headlam	217.00	-2.00	350.00	176.00	3.59	9.35	6.5
McBride	38.70	-0.30	46.00	19.00	-	-6.91	67.3
Philips €	18.56	0.00	20.94	12.13	4.44	28.57	1225.0
PZCusns	136.60	-	223.00	135.60	4.46	15.76	300.2
Redrow	470.00	7.20	558.50	367.40	5.21	5.83	401.1
Superdry Plc	50.50	-0.40	164.80	36.85	-	-2.27	1120.3
Vistry Group	789.50	14.50	966.50	502.00	5.07	6.92	766.8
Industrial Engineering							
Bodycote	605.00	-16.00	728.50	455.60	3.24	19.39	123.1
Goodwin	5250	40.00	5700	2795.2	1.95	29.02	0.4
Hill&Sm	1656	6.00	1862	919.00	1.78	38.96	68.5
IMI	1516	-4.00	1687.1	1117	1.51	20.71	287.4
MelroseInd	447.40	0.60	554.20	284.46	0.35	-46.60	3587.8
Renold	30.20	-0.20	33.00	20.60	-	10.79	57.0
RHIM	2754	-6.00	3118	1557	4.57	6.50	14.4
Rotork	302.20	-2.20	344.80	229.47	2.86	32.85	999.8
Severfd	61.00	0.40	76.20	47.10	4.75	10.89	124.6
Trifast	78.00	-0.40	93.50	46.70	2.05	12.89	0.8
Weir	1822.5	-20.50	2072	1389.5	0.63	30.79	749.6
Industrial General							
Coats Group	69.30	-0.10	82.70	51.18	2.03	15.46	1692.2
Macfrlne	108.00	-0.50	121.00	85.20	2.52	12.53	47.3
Smith DS	279.20	0.80	367.80	238.10	4.33	15.86	1591.9
Smiths	1613	-2.00	1807	1474.5	2.34	25.64	670.2
SmurfKap	2710	-6.00	3798.61	2415	3.62	12.36	335.2
Industrial Transportation							
Braemar#	233.00	3.00	350.00	215.00	2.15	7.73	171.6
Fisher J	322.50	-7.25	427.50	242.00	-	-5.84	67.7
int'ldistser	258.60	17.00	277.50	173.65	3.87	2.96	1412.3
OceanWil	990.00	4.00	1047.8	816.00	8.08	5.04	6.1
Insurance							
Admiral♦■	2353	30.00	2501	1813.78	3.47	19.53	489.5
Aviva✠	388.30	0.60	467.30	366.00	7.98	-19.61	7732.5
Chesnar	268.00	1.00	307.00	259.00	8.27	14.89	103.8
Direct Line	161.20	2.10	238.60	132.11	13.83	6.69	1849.3
Eccles prf	123.00	-1.00	140.00	115.00	7.01	-	65.5
Hansard	44.60	-1.70	55.02	32.40	9.98	15.38	48.7
Hiscox	968.50	25.50	1201	836.00	0.87	23.98	1266.2
Lancashire	577.00	22.00	670.00	454.20	1.99	-30.06	349.4
Leg&Gen	210.40	0.80	311.13	191.37	8.47	6.46	9788.4
Old Mut	50.70	-	58.30	42.90	5.44	7.36	1940.5
PhoenixGrp	458.20	4.00	643.20	449.30	10.52	-5.30	3027.0
Prudntl✠	855.20	-1.60	1357.5	782.40	1.73	8.62	2972.5
LEISURE							
PhotoMe International Plc	107.00	5.00	109.00	55.70	-	18.67	655.5
Media							
4imprint	5020	70.00	5391.87	3139	0.22	84.72	27.0
Auto Trader Group PLC	622.20	9.80	663.60	479.80	0.80	30.70	1606.7
DlyMailA	270.00	-2.50	1178	264.50	8.96	10.31	111.0
Informa	724.00	7.60	788.40	527.60	-	-32.04	1960.1
ITV	66.54	0.18	96.62	58.00	-	7.15	6417.2
Pearson	881.40	11.40	1006.29	749.40	2.25	42.17	1495.4
MEDIA							
Reach PLC	81.45	0.70	122.50	65.20	8.61	90.50	626.6
Media							
RELX PLC✠	2852	34.00	2870	2124	1.91	31.27	3333.7
Rightmove PLC	570.20	8.80	610.60	437.80	0.79	32.27	2163.0
STV Grp	183.50	2.50	315.00	175.00	5.29	4.48	65.6
WPP✠	719.00	1.00	1082	703.20	5.48	14.73	1464.7
Mining							
AngloAmer✠	2108.5	-33.00	3648.5	16.78	7.43	15.68	3081.7
AnGoldA R	302.25	4.99	556.88	227.00	3.09	11.64	1160.0
Antofagasta	1355	-1.00	1815	1053.5	3.93	14.02	671.4
BHP Group	2268.5	-11.00	2862	2028	-	9.92	1597.5
Ecora Resources	97.40	0.60	165.45	96.04	9.29	7.33	254.6
Ferrexpo	75.60	4.55	175.31	70.60	18.96	0.59	1156.0
Fresnillo	513.00	-7.40	996.80	499.30	4.75	12.15	846.8
Glencore✠	439.85	-3.45	583.25	410.95	6.32	7.36	17891.7
Harmony R	72.51	1.10	102.35	46.70	2.08	21.55	1617.2
PolymtIntl#	215.00	50.00	362.02	125.00	45.37	-	12.0
Rio Tinto✠	4957.5	26.00	6354	4473	7.74	11.96	1597.2
Troy Res A$	0.04	0.00	0.20	0.03	-	-0.94	3131.9
Oil & Gas							
BP✠	499.05	-0.40	570.57	4.75	3.97	6.38	26103.6
Capricorn Energy	179.40	6.00	558.30	149.80	-	1.42	431.8
ExxonMb $✠	109.15	-2.35	120.70	95.66	3.16	9.13	8980.5
Gazprom PJSC ADR $#	0.58	-	10.97	0.02	54.95	0.28	3213.3
GeoPark $	9.93	0.06	16.38	8.83	1.11	11.17	144.6
HELLENiQ ENERGY €	6.90	-0.19	8.68	6.40	1.41	6.47	120.8
ImpOil C$✠	77.90	-0.71	85.11	60.19	2.19	8.38	602.1
Shell PLC✠	2532.5	11.00	2663.73	2149.45	3.33	7.83	7840.7
TrnCan C$✠	46.07	0.84	66.19	43.70	7.88	51.58	697.6
Wood Group (John) PLC	148.00	1.30	228.66	102.05	-	-6.09	638.2
Pharmaceuticals & Biotech							
AstraZeneca✠	10902	10.00	12828.45	9499.21	2.06	35.09	1000.0
GlaxoSmh✠	1483	-3.80	1609	16.64	3.89	11.70	4384.5
HikmaPhm	2063	39.00	2222	1174.5	1.86	15.46	335.7
Oxfd Bio	287.50	-12.50	575.00	236.50	-	12.93	667.9
RichterG $	23.80	-0.20	26.60	17.60	2.58	11.44	0.0
Real Estate							
REITs							
Assura	41.62	0.68	59.65	40.46	6.97	8.32	7947.1
BritLand	312.10	2.70	522.29	292.70	4.82	42.75	3531.9
Cap&Reg	56.00	1.20	62.28	42.31	-	-0.49	10.0
Civitas SH	79.80	-	86.18	51.07	6.81	13.62	115.0
DrwntLdn	1861	24.00	2724	1810	4.05	8.29	407.7
Great Portland	393.80	5.40	605.50	380.80	3.20	-4.93	320.4
LandSecs	585.40	1.00	738.00	479.20	5.81	-15.28	897.7
LondonMtrc	169.00	4.30	204.20	158.00	5.18	3.60	6142.6
Palace Cap	223.00	-7.00	265.00	195.00	4.93	10.67	1.0
PrimyHth	90.55	1.20	122.50	88.25	6.85	9.24	2797.4
SEGRO	709.80	6.60	915.60	684.20	3.18	2.10	1747.4
Shaftesbury Cap	111.30	0.40	132.30	92.90	0.45	32.74	2077.4
TritaxBBOX	137.40	2.20	163.88	121.80	4.74	2.48	4318.4
Wkspace	464.40	3.20	557.50	335.20	3.82	-6.90	870.5
Real Estate Inv & Services							
Grainger	238.20	10.60	271.60	202.80	2.30	14.80	951.8
Harworth Grp	101.00	-1.00	128.50	97.84	1.81	3.49	31.6
Helical	210.00	9.00	399.00	200.50	4.81	5.07	276.4
Lon&Assc	10.25	-0.50	22.98	9.00	-	-1.39	100.0
Mntview	10350	-	12520	10000	4.11	12.90	0.1
Safestre	742.00	19.50	1088	701.50	2.72	4.21	299.0
Savills	816.00	6.00	1049	769.50	2.82	8.18	127.1
SiriusRE	84.05	-0.50	91.95	65.20	3.88	6.55	1435.8
Smart(J)	167.00	-	177.00	155.50	1.93	4.57	0.0
U+I	148.50	-0.50	151.50	58.51	-	-2.12	98.8
Retailers							
Caffyns	550.00	-	628.00	450.00	-	7.99	0.0
Dunelm	1023	24.00	1335.53	726.00	3.42	13.79	402.3
Halfords	184.50	2.80	234.80	142.77	2.71	6.15	333.3
Inchcape	719.00	5.50	941.00	689.00	1.85	24.29	386.1
JDSportsF	140.00	-4.30	213.12	88.40	0.21	16.91	9013.2
Kingfisher	215.00	2.30	296.24	198.60	5.60	5.40	6304.9
Marks&Sp	227.40	2.30	245.90	91.56	-	174.92	4695.2
Ocado	563.00	8.00	1017	342.00	-	-18.65	1135.9
Saga	110.80	-0.40	198.40	71.10	-	-11.84	208.6
Sainsbury (J)	256.40	2.30	291.00	168.70	4.13	21.55	6293.6
Tesco✠	280.40	9.70	307.23	194.35	4.12	27.82	23282.3
Support Services							
AshtdGp	4779	47.00	6012	3969	0.95	23.27	704.7
Bunzl	2933	24.00	3226.48	2603	1.86	22.25	503.2
Capita	16.40	-	44.92	16.16	-	1.25	3749.9
DCC	4471	-3.00	5038	3986	3.57	14.78	107.3
DeLaRue	60.50	-	106.47	29.10	-	7.96	141.5
Diploma	2902	-2.00	3346	2222	1.46	51.91	217.0
Essentra PLC♦	167.40	2.80	256.00	142.40	3.17	18.81	457.2
Experian	2719	32.00	3126	2537	1.29	34.88	755.6
Ferguson	13250	148.99	13810	8852	1.36	19.56	106.7
Hays	102.40	-3.50	130.95	96.90	1.19	14.78	2651.4
HowdenJny	695.80	3.40	766.60	472.60	1.93	13.13	1259.8
Intertek	4124	45.00	4549	3485	2.57	23.18	172.2
Kin and Carta	81.00	-1.20	253.50	55.20	-	-67.50	456.5
Mitie	97.00	3.20	107.00	60.80	-	48.50	1077.5
Rentokil	603.20	6.20	663.80	461.10	1.24	42.78	3272.1
Ricardo	460.00	-12.00	619.60	411.00	1.49	41.07	36.5
RbrtWlts	384.00	4.00	620.00	346.00	4.27	8.79	4.8
RS Grp	723.00	8.60	1046	684.80	2.60	12.01	567.1
SIG	35.10	-0.10	45.38	27.00	-	-14.63	187.2
Vp	522.50	-	755.00	482.00	4.78	12.87	6.6
Tech - Hardware							
SpirentCM	93.80	3.70	294.00	79.75	4.87	8.74	2099.6
Tech - Software & Services							
Computcnt	2490	-12.00	2609.97	1780	2.22	15.48	74.0
NCC Grp	110.00	-1.00	227.00	75.80	4.23	36.67	819.1
Sage	981.80	3.40	1055	665.60	1.77	37.65	1566.5
TriadGp	125.00	-	170.00	77.00	1.60	13.72	0.2
Telecommunications							
Airtel Africa	119.60	-0.70	139.80	102.20	2.72	10.66	1779.7
BT✠	114.55	1.45	161.40	22.98	6.72	6.06	12379.4
TelePlus	1490	20.00	2530	1412	3.83	38.21	66.1
Vodafone Gp✠	76.10	0.93	108.00	69.73	10.39	2.03	62974.0
Tobacco							
BrAmTob✠	2508.5	45.00	3473.5	2458.41	6.64	6.48	4938.4
Imperial Br✠	1642	62.00	2185	1553.5	8.60	9.33	2449.6
Travel & Leisure							
Carnival	956.20	5.00	1376.63	498.90	-	-1.54	349.9
Dalata Hotel	363.00	-10.00	424.00	239.00	-	-154.40	33.2
easyJet	438.30	15.90	582.71	278.60	-	-2.76	5034.9
FirstGrp	145.40	0.50	166.70	89.55	-	34.62	837.1
Flutter Entertainment	13280	140.00	16832.1	9844	-	-56.15	530.2
Fuller A	584.00	2.00	618.60	435.00	-	-12.20	9.1
IntCon Htels Gp	6082	36.00	6344	4287	-	56.97	374.4
Intl Cons Air	155.10	3.85	172.95	1.85	-	-3.44	21079.8
TUI	436.00	5.60	766.26	296.59	-	-4.55	870.0
Whitbrd	3317	31.00	3709	2343	-	-26.92	1382.3
Utilities							
Drax	408.20	6.70	728.50	395.20	4.36	30.24	780.0
Natl Grid✠	947.60	10.40	1229.21	844.29	5.45	12.84	4367.7
Pennon	610.00	14.00	1013	532.83	5.35	44.20	583.0
Severn Trent	2308	36.00	2999.02	2167.42	4.40	-85.80	573.3
SSE	1514.5	6.50	1919	1405	5.35	5.92	2806.4
UtdUtils	933.20	13.20	1111	813.20	4.63	85.61	1179.1

AIM

	Price	+/-Chg	52 Week High	52 Week Low	Yld	P/E	Vol 000s
Aerospace & Defence							
Cohort	492.00	-13.00	560.00	384.00	2.26	43.73	37.2
Velocity Composites PLC	38.50	1.50	65.00	13.65	-	-12.83	27.9
Banks							
Caribbean Inv	26.50	-	45.40	24.03	-	3.05	138.6
Basic Resource (Ex Mining)							
CropperJ	765.00	-	1050	560.00	-	23.32	1.2
Chemicals							
Directa Plus PLC	44.50	-	108.00	43.00	-	-10.37	4.3
Versarien PLC	1.11	0.06	23.00	0.90	-	-0.32	501.2
Construction & Materials							
AccsysTch	68.70	-0.60	108.00	54.40	-	-40.36	25.4
Electronic & Electrical Equip							
Checkit	30.00	-0.20	35.00	13.74	-	-3.66	86.2
LPA	73.50	-4.50	104.00	71.06	-	-272.22	28.8
ThorpeFW	380.00	-8.00	460.00	342.00	1.53	26.44	40.9
Zytronic	80.00	-	155.00	74.00	-	26.67	4.5
Financial General							
Arbuthnot	960.00	-5.00	1150	780.00	1.67	21.24	0.3
BP Marsh	360.00	-	428.00	282.56	0.68	9.92	1.5
Burford Capital Ltd	1067	-12.00	1388	478.00	1.29	-4372.95	138.4
Gresham House Plc	1070	-	1075	652.00	0.56	42.95	164.2
MattioliWds	570.00	10.00	660.00	530.00	3.68	-203.57	40.4
Premier Miton Group	61.00	-	137.98	59.00	13.44	6.81	65.8
STM Group	52.50	2.50	62.60	23.10	2.67	20.22	10.9
Food & Beverages							
Camellia	4340	70.00	6300	4048.6	3.32	79.93	1.6
Fevertree Drinks	1061	-27.00	1489	835.00	1.49	27.78	324.9
Nichols	930.00	2.00	1520	897.00	2.00	-15.49	37.0
Health Care Equip & Services							
AVO#	1.93	-	25.75	1.75	-	-0.23	200.0
Tristel	397.50	-22.50	450.00	272.00	1.65	81.96	22.3
House, Leisure & Pers Goods							
Churchll	1215	-	1725	1070	-	144.64	2.5
Frontier Developments PLC	203.50	-4.00	1446	202.50	-	5.86	59.4
Portmern	257.00	-1.00	522.65	253.00	5.06	10.94	7.7
Sanderson Design Grp	106.00	1.50	148.00	95.00	-	9.08	99.0
Industrial Engineering							
600 Grp#	2.65	-	13.50	2.00	-	15.50	40.4
MS Intl	720.00	-25.00	835.00	314.24	0.49	102.86	21.5
Pres Tech	25.50	-1.10	47.52	24.00	-	-2.12	58.8
IT							
Keywords Studios	1385	4.00	3056	1262	0.05	38.38	140.8
Learning Technologies Group	67.40	1.30	153.10	63.00	1.85	28.39	862.3
Media							
Mission Group	36.00	-0.50	59.00	34.00	6.47	6.10	2.9
Mining							
AMC#	0.09	-	1.99	0.07	-	-2.09	5981.6
CentAsiaM	165.40	-4.60	299.00	165.40	9.78	4.85	548.8
Gemfields	12.95	-0.30	20.27	12.50	-	-17.89	1553.6
Oil & Gas							
BorSthnPet	2.10	0.07	4.00	1.71	-	-20.59	202.6
Phoenix Global	6.50	0.25	7.95	3.07	-	-1.63	53.0
UnJackOil	20.25	-0.75	37.00	18.58	-	-10.49	105.3
Pharmaceuticals & Biotech							
Reneuron	6.10	0.15	30.00	5.00	-	-0.38	4.5
Sareum	80.00	-2.33	237.50	55.10	-	-26.67	103.9
Real Estate							
Lok'nStor	664.00	-36.00	1000.00	660.00	2.26	20.13	15.0
Retailers							
Boohoo Group PLC	30.00	0.14	60.94	27.77	-	6.47	14173.5
CVS Group PLC	1602	4.00	2226	1365	0.41	44.87	134.2
Support Services							
Begbies	107.50	-1.75	150.69	107.00	2.79	537.50	186.6
Christie	115.00	-	167.00	100.00	-	48.94	2.5
Impellam	665.00	-	770.00	540.00	-	19.00	15.7
JhnsnSrv	133.40	1.40	141.00	77.50	-	83.38	407.4
LonSec	3000	-	3200	2150	2.67	16.55	0.0
NWF	217.50	-	288.00	205.00	3.45	7.23	14.3
Petards	4.75	-	12.00	4.65	-	8.64	135.5
Renew	688.00	-2.00	774.00	550.00	1.91	17.00	88.0
Smart Metering Systems	586.00	9.00	934.00	574.00	4.48	183.70	429.6
Tech - Software & Services							
BoBlue Prism Group PLC	1274	-	1392	747.50	-	-23.65	1869.0
Eckoh	37.50	-0.50	46.00	30.00	1.63	36.76	184.6
Oxford Metrics	80.50	-3.50	121.64	80.00	2.24	35.00	143.8
Travel & Leisure							
gamingrealms	34.30	0.50	39.50	22.00	-	-857.50	534.4
Jet2	1074	32.00	1394.5	637.40	-	-5.77	273.9
MinoanGp	0.78	-	1.30	0.76	-	-5.53	340.6

Investment Companies

Conventional (Ex Private Equity)	Price	+/-Chg	52 Week High	52 Week Low	Yld	NAV	Dis(-) or Pm
abrdnuksm	394.00	2.00	485.34	388.98	1.95	450.9	-12.6
3i Infra	302.50	5.50	346.00	276.74	3.24	336.3	-10.1
AbnAsianIn	197.00	-	237.00	185.50	5.18	225.8	-12.8
Abf Sml	1188	4.00	1428	1066	2.85	1374.1	-13.5
Abf Spl Inc	70.00	-0.70	80.00	53.40	4.36	71.3	-1.8
abrdn Asia Focus	258.00	-1.00	271.00	224.24	1.16	307.9	-16.2
abrdnDivInc&Grwth	80.20	-1.80	99.00	78.00	6.86	111.0	-27.7
Abrdn Eqt Inc	305.00	-1.00	367.76	290.00	6.75	298.9	2.0
abrdnJapInv	585.00	-5.00	698.50	507.49	2.56	671.7	-12.9
Alliance	1014	-2.00	1070.37	884.00	1.66	1080.4	-6.1
AllianzTech	257.00	-	277.00	201.50	-	295.1	-12.9
Art Alpha	304.00	10.00	355.00	263.97	1.74	341.2	-10.9
Asia Dragon	350.00	2.00	457.00	338.27	1.86	417.6	-16.2
Aurora Inv	204.00	-0.50	240.00	178.00	0.27	233.5	-12.6
AVI JapOpp	111.50	1.50	129.00	103.00	1.21	113.7	-1.9
Axiom#	85.50	-1.00	93.29	65.00	7.02	-	-
BG Euro	81.70	0.30	102.20	73.50	0.43	94.6	-13.6
BG Japan	683.00	13.00	829.00	662.00	0.88	758.1	-9.9
BG Shin	124.20	2.60	163.87	121.60	-	142.6	-12.9
Baillie Gifford UK	150.20	0.60	180.80	139.40	1.61	176.4	-14.9
Bankers	94.60	-0.10	107.00	90.88	2.29	109.6	-13.7
BB Healthcare Trust	133.20	0.20	176.60	131.60	4.14	148.0	-10.0
BiotechGth	746.00	-	1003.31	742.24	-	808.7	-7.8
BlckRoEne	109.80	-2.20	149.50	108.00	3.64	122.4	-10.3
BlckRFrnt	140.00	-3.00	148.00	123.00	3.68	154.9	-9.6
BlckRGtEur	488.00	-0.50	566.00	396.00	1.26	524.1	-6.9
BlckR I&G	179.50	-1.00	202.00	164.00	4.01	201.5	-10.9
BlckRSmlr	1202	10.00	1450	1166	2.77	1394.7	-13.8
BlckRckSusAm	178.50	-0.50	215.00	178.00	4.48	193.5	-7.8
BlckRThrmt	551.00	4.00	670.00	487.19	1.85	579.1	-4.9
BlckRWld	546.00	5.00	774.00	539.97	4.36	566.1	-3.6
Brunner	1040	-5.00	1115	888.00	1.94	1204.4	-13.6
Caledonia Inv	3230	-30.00	4065	3050	1.95	5203.1	-37.9
CanGen C$	34.50	-0.14	37.40	29.11	2.49	53.3	-35.3
City Lon	386.50	2.00	432.00	366.50	4.95	385.3	0.3
CQSNatRs	168.00	-0.75	217.00	160.75	3.33	193.6	-13.2
CTMgdl	110.00	-	129.29	106.06	5.77	105.7	4.1
CTMgdG	221.00	-	245.88	214.00	-	221.5	-0.2
CT Cp&I	302.00	7.00	341.00	269.56	3.84	288.5	4.7
CT UK HIT B	81.00	0.50	93.00	77.00	6.54	81.9	-1.1
CT UK HIT Ord	80.00	-	89.00	71.00	6.63	81.7	-2.1
CT UK HIT UNIT	311.00	-	356.00	294.00	-	326.7	-4.8
Dun Inc	263.00	1.00	309.52	250.75	4.87	293.4	-10.4
Edin Inv	651.00	4.00	690.00	548.00	3.69	715.5	-9.0
Edin WWd	132.60	-	193.00	131.40	-	161.6	-17.9
EuroAsset	81.10	-0.90	97.80	74.60	9.86	88.3	-8.2
Euro Opps	780.00	2.00	818.00	608.00	0.26	866.1	-9.9
F&C Inv Trust	863.00	-3.00	992.00	825.67	1.44	956.9	-9.8
FidAsian	506.00	2.00	536.00	413.61	1.74	546.5	-7.4
FidChiSpS	206.00	-	299.46	181.97	2.27	231.7	-11.1
FidelityEmrgMkt	586.10	-4.20	649.90	552.70	2.25	683.6	-14.3
Fid Euro	326.00	-1.50	362.00	258.50	2.01	347.8	-6.3
Fid Jap	159.00	4.00	187.00	154.00	-	179.9	-11.6
Fid Spec	265.00	3.00	293.50	235.83	2.22	288.1	-8.0
FinsG&I	832.00	2.00	923.00	760.22	3.09	871.3	-4.5
GRIT	1.03	-	11.10	0.83	-	9.6	-89.3
HAN	186.50	-2.00	201.30	161.00	1.72	316.5	-41.1
HANA	181.00	-3.25	193.92	160.00	1.77	316.5	-42.8
Hen Div Inc Tr	64.80	0.20	74.60	60.37	6.79	68.7	-5.7
HenEuroF	154.00	2.00	166.82	120.60	2.03	173.6	-11.3
HenEuro	133.50	1.00	141.00	105.51	1.87	153.4	-13.0
HenFarEs	212.50	-1.00	296.92	208.00	10.96	218.3	-2.7
HenHigh	153.50	-2.50	181.00	140.00	6.48	159.1	-3.5
HenInt Inc	158.00	-2.75	184.00	153.00	3.80	176.6	-10.5
Hen Opp	923.00	-2.00	1260	902.00	2.93	1081.7	-14.7
HenSmlr	675.00	3.00	907.00	669.00	3.52	770.2	-12.4
Herald	1680	2.00	1966	1660	-	1992.8	-15.7
HICL Infra	119.40	0.80	170.40	117.20	6.91	165.0	-27.6
Highbridge Tactical	425.00	-	500.00	216.00	-	-	-
Impax Env.	363.00	0.50	462.50	356.57	1.05	387.1	-6.2
Ind IT	420.50	-	583.16	385.00	1.90	-	-
IntBiotech	600.00	-1.00	744.00	596.00	4.73	646.4	-7.2
Intl PP	120.00	1.20	159.00	117.79	6.22	153.4	-21.8
Inv AsiaTr	302.00	-9.00	374.00	280.00	5.33	351.0	-14.0
Invesco Bond Inc	165.00	-	173.00	145.00	6.36	159.7	3.3
IPST BalR	117.00	-	138.00	111.00	-	145.2	-19.4
IP UKSmall	393.00	-4.50	478.00	373.50	4.92	431.6	-8.9
JPM Amer	784.00	-	830.00	657.62	0.86	798.4	-1.8
JPM Asia	343.00	-1.00	402.26	294.50	5.51	375.4	-8.6
JPM China	236.00	2.00	419.00	233.50	9.66	270.5	-12.8
JPM Emrg EMEA	83.00	-0.30	794.00	55.20	42.17	46.8	77.4
JPM Emrg	99.50	-0.70	120.45	91.00	1.36	111.3	-10.6
JPM EurGth & Inc	89.80	0.60	99.80	75.00	6.35	100.8	-10.9
JPM EuDisc	367.00	2.00	449.00	339.00	1.83	423.6	-13.4
JPM Clavr	642.00	-6.00	722.00	625.20	4.83	686.3	-6.5
JPMGblCoreRa	77.20	-	105.50	65.11	4.86	98.3	-21.5
JPM GEI	121.00	0.50	142.50	108.00	4.21	136.2	-11.2
JPM Gl Gr&Inc	461.00	1.00	484.00	394.00	3.27	453.4	1.7
JPM Ind	856.00	-	902.00	764.00	-	1053.6	-18.8
JPM JpCapSm G&I	295.00	2.00	347.00	290.00	7.59	344.6	-14.4
JPM Jap	455.50	6.50	521.00	416.00	1.12	500.8	-9.0
JPM Mid	864.00	-18.00	974.75	735.00	3.41	982.1	-12.0
JPM Smlr	254.00	-0.90	303.00	230.00	2.24	291.5	-12.9
JPM US Sml	342.00	-2.00	444.48	341.88	0.73	398.4	-14.2
KeystoneInv	198.00	-1.50	228.50	180.62	5.66	230.9	-14.2
Law Deb	774.00	-5.00	871.08	655.00	3.70	771.6	0.3
LinTrain £	884.00	-4.00	1140	822.00	5.32	968.0	-8.7
Lowland	108.50	-1.00	135.00	99.05	5.53	125.6	-13.6
Majedie	197.00	1.00	223.00	156.80	5.79	245.2	-19.7
Marwyn Val	80.00	-	104.60	79.00	5.66	168.2	-52.4
MercantIT	189.20	2.20	222.00	163.00	3.54	219.2	-13.7
MrchTst	509.00	-3.00	606.00	480.00	5.35	505.3	0.7
Mid Wynd	690.00	-	732.00	639.80	0.93	707.9	-2.5
Monks	920.00	2.00	1056	906.00	0.22	1070.0	-14.0
MontanSm	116.20	1.20	151.20	104.70	0.80	134.9	-13.9
Mur Inc	808.00	8.00	886.00	716.80	3.74	882.3	-8.4
Mur Int	227.50	-3.50	275.84	225.60	23.96	-	-
New Star IT	114.00	-0.50	137.00	112.00	1.23	176.7	-35.5
NthAtSml	3500	-	4060	3125	0.86	5147.3	-32.0
PacAsset	369.00	-	384.00	326.00	0.65	395.8	-6.8
PacHorzn	541.00	4.00	694.00	507.75	-	601.1	-10.0
PerAsset	459.00	0.50	487.50	458.00	122.00	-	-
Petershill plc	147.40	-2.20	210.00	140.00	-	-	-
PolarHealth	313.00	2.00	346.25	311.00	0.64	339.4	-7.8
PolarFins	136.60	0.20	164.59	130.60	2.94	153.3	-10.9
PolarTech	2200	-10.00	2340	1697.57	-	2556.1	-13.9
RIT Cap	1840	-18.00	2400	1784	1.92	2380.0	-22.7
Ruffer Inv Pr	270.00	1.00	318.00	262.00	0.67	278.0	-2.9
Schroder ToRt	402.00	-2.00	457.00	366.50	1.77	428.8	-6.2
SchdrAsiaP	480.00	-1.00	549.75	446.00	1.67	545.0	-11.9
SchdrEurReE	69.00	-1.40	89.75	68.80	7.95	117.3	-41.2
Schdr Inc	255.00	-5.00	324.00	254.00	4.94	283.9	-10.2
SchdrJap	231.00	3.00	246.00	190.00	2.12	255.6	-9.6
SchdrOrient	244.00	-1.50	280.08	230.00	4.22	257.5	-5.2
SchdrRealEst	42.55	0.85	50.40	39.60	5.95	65.0	-34.5
SchdrUKMd	522.00	-	626.00	457.13	2.55	586.8	-11.0
SchdrUKPubPriv	14.73	1.73	26.00	11.50	-	24.6	-40.1
ScotAmer	485.50	-	543.00	442.00	2.53	511.7	-5.1
ScottMort	667.40	1.80	833.80	604.80	0.51	809.3	-17.5
ScottOrtll	1305	-15.00	1375	1080	0.88	1515.5	-13.9
Smithson	1254	-1.00	1484	1120	-	1444.8	-13.2
StrategicEq	307.00	1.00	321.00	252.00	0.52	327.9	-6.4
Temp Bar	228.00	0.50	249.50	197.20	4.21	243.1	-6.2
Tetragon $	9.90	-	10.60	8.49	3.63	29.9	-66.9
EurSmlCom	144.00	-1.00	172.50	124.50	2.17	167.6	-14.1
GblSmlrTrst	136.00	0.20	162.80	124.00	1.29	159.4	-14.7
TRIG	101.00	0.80	139.20	99.73	6.68	132.4	-23.7
TroyInc&G	68.40	0.20	74.00	64.43	3.88	69.3	-1.3
Utilico Emerging Market	214.00	-2.00	234.00	197.50	3.67	254.3	-15.8
UIL Inv	123.00	1.00	185.00	118.64	6.50	193.5	-36.4
VEIL	572.00	-6.00	660.00	500.00	-	706.0	-19.0
Witan	219.50	1.50	237.00	199.78	2.51	241.9	-9.3
WwideHlth	302.50	3.00	345.00	296.00	7.27	-	-

Conventional - Private Equity	Price	+/-Chg	52 Week High	52 Week Low	Yld	NAV	Dis(-) or Pm
abrdnPvEq	425.00	5.00	494.00	365.00	3.18	754.8	-43.7
BGUSGROWTH	146.40	1.20	182.80	132.11	-	188.8	-22.5
BG China Growth	207.00	-	330.00	205.50	3.45	243.7	-15.1
CT PvtEq	434.00	-11.00	534.00	390.00	4.27	673.8	-35.6
HVPE	2210	20.00	2450	1900	-	3923.0	-43.7
HgCapital	371.00	6.00	420.00	316.00	1.35	473.0	-21.6
ICG Ent Tr	1160	10.00	1223.76	944.00	2.16	1901.2	-39.0
Pantheon Intl	290.50	-0.50	306.00	229.23	-	458.7	-36.7
PrincssPE €	10.15	-0.10	11.00	7.80	6.40	15.0	-32.3
Unbound Group plc#	0.75	-	22.58	0.00	-	-	-

Discretionary Unit Fund Mngrs (1000)F	Price	+/-Chg	52 Week High	52 Week Low	Yld	NAV	Dis(-) or Pm
Right &ISS	1910	5.00	2220	1810	1.69	2112.6	-9.6

Conventional - Property ICs	Price	+/-Chg	52 Week High	52 Week Low	Yld	NAV	Dis(-) or Pm
Direct Property							
AEW UK REIT	99.10	1.90	108.60	88.10	8.07	107.2	-7.6
Bal ComPrp	65.50	0.70	98.00	64.10	6.53	117.2	-44.1
CT Prop T	82.90	-2.10	89.60	60.00	4.46	-	-
Longbow	22.30	0.10	56.50	20.00	26.91	39.3	-43.3
TR Prop	270.00	1.50	350.70	254.00	5.26	296.1	-8.8
Tritax EuroBEUR €	0.56	0.00	0.82	0.55	8.56	1.0	-44.0
Tritax EuroBGBP	48.55	0.30	73.00	48.20	-	-	-
UKComPrp	54.40	1.30	68.11	47.15	5.37	81.1	-32.9

VCTs	Price	+/-Chg	52 Week High	52 Week Low	Yld	NAV	Dis(-) or Pm
Baronsmead 2nd VT	55.00	-	64.50	51.00	11.82	57.2	-3.8
Inc&GthVCT	74.00	-	78.64	70.00	6.76	72.5	2.1
Nthn 2 VCT	55.00	-	64.32	48.00	6.36	57.7	-4.7
Nthn 3 VCT	85.00	-	87.00	78.50	5.29	89.1	-4.6
NthnVent	56.50	-	60.54	53.50	7.96	60.5	-6.6

Zero Dividend Preference Shares	Price	+/-Chg	52 Week High	52 Week Low	HR SP	HR WO	TAV 0%
Abf Spl Inc	119.50	-	121.06	113.00	-79.2	-99.7	127.3
UIL Finance 2028 ZDP	91.50	-	102.00	82.40	-25.4	-31.1	152.3
UIL Finance 2026 ZDP	112.00	-	117.00	104.36	-36.9	-46.0	151.5

Investment Companies - AIM

	Price	+/-Chg	52 Week High	52 Week Low	Yld	NAV	Dis(-) or Pm
BB Biotech AG SFr	52.70	-	67.00	49.35	6.2	-	-
CrysAmber	65.00	-	119.70	60.00	3.8	97.8	-33.5
Infra India#	0.50	-	1.28	0.20	-	10.6	-95.3

Guide to FT Share Service

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Trading volumes are end of day aggregated totals, rounded to the nearest 1,000 shares.

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- ✠ FT Global 500 company
- ♦ trading ex-dividend
- ■ trading ex-capital distribution
- # price at time of suspension from trading

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MANAGED FUNDS SERVICE

SUMMARY

FT.COM/FUNDS

Winners - India Fund Large-Cap

Fund Name	1yr Return GBP	3yr Return GBP	5yr Return GBP	3yr Sharpe Ratio	3yr Std Dev
Nippon India Large Cap Fund	0.22	0.29	0.15	1.53	15.18
HDFC Top 100 Fund	0.20	0.26	0.14	1.39	14.85
ICICI Prudential Bluechip Fund	0.18	0.23	0.14	1.41	13.02
SBI Bluechip Fund	0.16	0.22	0.15	1.20	14.29
Tata Large Cap Fund	0.15	0.22	0.14	1.22	14.01

Losers - India Fund Large-Cap

Fund Name	1yr Return GBP	3yr Return GBP	5yr Return GBP	3yr Sharpe Ratio	3yr Std Dev
Axis Bluechip Fund	0.06	0.14	0.13	0.69	14.72
Groww Large Cap Fund	0.12	0.16	0.11	0.88	14.07
LIC MF Large Cap Fund	0.08	0.16	0.12	0.87	14.25
PGIM India Large Cap Fund	0.13	0.17	0.11	0.95	12.94
Taurus Largecap Equity Fund	0.07	0.17	0.10	0.84	15.66

Morningstar Star Ratings

Fund Name	Base Currency	Morningstar Rating 3 Yr	Morningstar Rating 5 Yr	Morningstar Rating 10 Yr
Index UK P-Acc	Pound Sterling	★★★	★★★	★★★★
EM Mkts Loc.Ccy Bd USD F	US Dollar	★★★	★★★	★★★
Rubrics Global Fixed Income UCITS Fund	US Dollar	★★★	★★★★	★★★★
Emerging Mkts NAV	Pound Sterling	★	★★	★★
EM Mkts Corp.Debt USD F	US Dollar	★	★	★

Global Broad Category Group - Convertibles

Morningstar Category	Base Currency	Total Ret 1Yr GBP	Total Ret 3Yr GBP	Total Ret 5Yr GBP
World Convertible Bond	Yen	8.97	6.69	4.73
Japan Convertible Bond	Yen	1.30	3.37	6.08
Convertible Bond - Asia/Japan	US Dollar	11.43	2.95	3.55
Euro Convertible Bond	Euro	13.13	0.89	3.12
Convertible Bond - Global, USD Hedged	US Dollar	3.07	-1.75	1.70

Advertising Feature

PRUSIK

Please remember that past performance is not necessarily a guide to future performance

Firm Name	
Prusik Investment Management LLP	
Fund Name	
Prusik Asia Emerging Opportunities Fund A Acc	
Morningstar Category	
Asia ex-Japan Small/Mid-Cap Equity	
Max Annual Charge	
10.00	
3Yr Rating	
★★★★	
Morningstar Sustainability Rating	

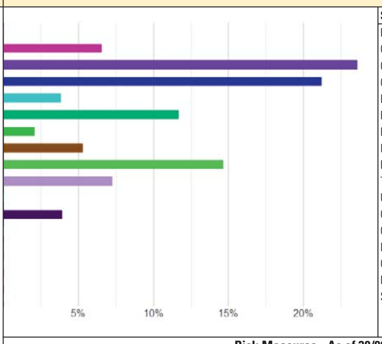
Bid Price	-	KIID Ongoing Charge	2.25
Offer Price	-	Day-End One Year Return	0.96
+/-	1.15	**Total Ret 3Yr**	10.00

Performance

Oct 2020 - Jun 2023
Prusik Asia Emerging Opportunities Fund A Acc

Day ↗0.64% Month ↗3.00% Year ↗0.96%

Weightings - As of 30/04/2023



Sector	Weighting	Cat Avg.
Basic Materials	-	6.24%
Communication Services	6.54%	3.41%
Consumer Cyclical	23.58%	20.77%
Consumer Defensive	21.18%	6.93%
Energy	3.84%	1.62%
Financial Services	11.67%	11.53%
Healthcare	2.09%	6.06%
Industrials	5.28%	15.42%
Real Estate	14.65%	5.12%
Technology	7.25%	18.18%
Utilities	-	1.77%
Cash & Equivalents	3.93%	2.89%
Corporate	-	0.05%
Derivative	-	0.00%
Government	-	0.01%
Municipal	-	-
Securitized	-	-

Risk Measures - As of 30/06/2023

	1Yr	1Yr Cat Ave	3Yr	3Yr Cat Ave	5Yr	5Yr Cat Ave
Alpha	-5.83	-4.92	1.19	-2.96	-0.15	-1.46
Beta	0.52	0.94	0.69	0.91	0.88	0.92
Information Ratio	-0.67	-0.90	-0.20	-0.52	-0.09	-0.29
R Squared	60.36%	83.78%	60.02%	82.29%	70.90%	84.89%
Sharpe Ratio	-0.20	0.33	0.59	0.19	0.19	0.17
Std Dev	12.87	17.82	15.35	18.14	20.54	19.44

Top 10 Holdings - As of 30/04/2023

Holding	Sector	Weighting
FPT Corp	Technology	7.25%
PT Bank Central Asia Tbk	Financial Services	5.32%
Saigon Beer Alcohol Beverage Corp	Consumer Defensive	4.57%
Mobile World Investment Corp	Consumer Cyclical	4.30%
Wilcon Depot Inc	Consumer Cyclical	4.11%
Vincom Retail JSC Ordinary Shares	Real Estate	4.09%
Bajaj Finance Ltd	Financial Services	4.07%
Reliance Industries Ltd	Energy	3.84%
Sea Ltd ADR	Consumer Cyclical	3.75%
Tata Consumer Products Ltd	Consumer Defensive	3.60%

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LGT Wealth Management (CI) Limited (JER)
Sir Walter Raleigh House, 48 - 50 Esplanade, St Helier, Jersey, JE2 3QB
FCA Recognised
Volare Offshore Strategy Fund Limited

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Bridge Fund	£ 2.0927	-	0.0034	2.45	0.05	1.65
Global Equity Fund	£ 3.2904	-	0.0156	1.54	3.65	4.70
Global Fixed Interest Fund	£ 0.7032	-	0.0003	6.85	4.13	-4.61
Income Fund	£ 0.5986	-	-0.0004	3.38	0.80	2.73
Sterling Fixed Interest Fund	£ 0.6458	-	0.0015	4.99	5.81	-7.09
UK Equity Fund	£ 1.7987	-	-0.0058	3.51	2.45	3.83

Algebris Investments (IRL)
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Algebris Core Italy I EUR	€ 139.15	-	-0.39	0.00	6.05	9.36
Algebris Core Italy R EUR	€ 131.27	-	-0.37	0.00	5.26	9.62
Algebris Financial Credit I EUR	€ 175.42	-	-1.47	0.00	9.11	-0.60
Algebris Financial Credit R EUR	€ 150.05	-	-1.26	0.00	8.35	-1.21
Algebris Financial Credit Rd EUR	€ 87.68	-	-0.74	6.20	8.35	-1.17
Algebris Financial Equity B EUR	€ 176.01	-	0.10	0.00	18.82	28.82
Algebris Financial Equity R EUR	€ 146.80	-	0.08	0.00	17.65	27.59
Algebris Financial Income I EUR	€ 185.04	-	0.38	0.00	12.36	12.53
Algebris Financial Income R EUR	€ 167.12	-	0.33	0.00	11.35	11.51
Algebris Financial Income Rd EUR	€ 98.50	-	0.21	4.97	11.36	11.52
Algebris Global Credit Opportunities I EUR	€ 130.35	-	-0.24	0.00	9.67	2.09
Algebris Global Credit Opportunities R EUR	€ 126.85	-	-0.23	0.00	9.22	1.73
Algebris Global Credit Opportunities Rd EUR	€ 108.19	-	-0.20	3.54	9.27	1.85
Algebris IG Financial Credit I EUR	€ 97.42	-	-0.09	0.00	7.61	-2.82
Algebris IG Financial Credit R EUR	€ 95.52	-	-0.08	0.00	7.09	-3.30
Algebris Sust. World B	€ 103.68	-	0.75	-	-	-
Algebris Sust. World R	€ 102.40	-	0.74	-	-	-

The Antares European Fund Limited
Other International

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
AEF Ltd Usd	$ 528.32	-	2.36	0.00	-4.19	-3.91
AEF Ltd Eur	€ 481.04	-	2.33	0.00	-5.78	-4.80

Artemis Fund Managers Ltd (1200)F (UK)
57 St. James's Street, London SW1A 1LD 0800 092 2051
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Artemis SmartGARP UK Eq I Acc	2322.80	-	-7.99	4.03	7.19	17.34
Artemis Corporate Bond I Acc	96.98	-	0.21	4.74	6.35	-3.83
Artemis SmartGARP Eur Eq I Acc	461.64	-	-1.37	2.38	23.11	14.06
Artemis European Opps I Acc	127.70	-	0.36	0.11	11.04	3.60
Artemis SmartGARP GloEmr Eq I Acc	172.97	-	-0.90	-	10.12	10.25
Artemis SmartGARP Glo Eq I Acc	384.37	-	0.28	2.99	2.53	10.45
Artemis Global Income I Inc	108.07	-	0.08	3.45	3.60	12.26
Artemis Global Select I Acc	165.18	-	0.88	0.96	3.80	4.89
Artemis High Income I Q Inc	66.81	-	0.10	6.46	8.73	1.08
Artemis Income I Inc	244.57	-	0.40	3.99	9.81	9.80
Artemis Monthly Dist I Inc	66.97	-	0.04	4.84	2.09	4.53
Artemis Positive Future Fund	60.80	-	0.48	0.00	-9.51	-
Artemis Strategic Assets I Acc	99.25	-	0.01	1.63	12.89	10.22
Artemis Strategic Bond I Q Acc	99.96	-	0.30	4.48	3.75	-2.79
Artemis Target Return Bond I Acc	108.78	-	0.11	4.33	7.23	1.64
Artemis UK Select Fund Class I Acc	780.56	-	-2.66	2.75	21.65	13.52
Artemis UK Smaller Cos I Acc	1902.68	-	0.95	2.30	0.62	11.27
Artemis UK Special Sits I Acc	772.84	-	4.01	1.78	16.41	10.55
Artemis US Abs Return I Hdg Acc	113.41	-	-0.22	0.24	1.35	0.27
Artemis US Extended Alpha I Acc	352.01	-	2.38	0.00	7.43	9.98
Artemis US Select I Acc	316.51	-	2.53	0.16	5.44	6.79
Artemis US Smlr Cos I Acc	291.92	-	-0.63	0.00	-8.47	1.75

Ashmore Group
61 Aldwych, London WC2B 4AE. Dealing team: +352 27 62 22 233
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Emerging Markets Equity Fund	$ 115.34	-	0.06	0.00	7.18	-1.52
Emerging Markets Equity ESG Fund	$ 132.65	-	0.20	0.00	8.57	-2.91
Emerging Markets Active Equity Fund	$ 115.55	-	-0.30	0.00	3.47	-4.83
Emerging Markets Frontier Equity Fund	$ 181.54	-	-1.23	0.98	2.42	8.24
Emerging Markets Blended Debt Fund	$ 48.88	-	-0.27	5.36	4.02	-9.41
Emerging Markets Blended Debt ESG Fund	$ 87.21	-	-0.99	0.00	5.48	-6.27
Emerging Markets Debt Fund	$ 53.79	-	-0.34	5.92	6.27	-10.01
Emerging Markets Corporate Debt Fund	$ 56.18	-	-0.09	7.05	3.55	-7.46
Emerging Markets Local Currency Bond Fund	$ 59.49	-	-0.34	5.03	9.21	-2.21

Atlantas Sicav (LUX)
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
American Dynamic	$ 6650.59	-	-51.75	0.00	13.69	6.02
American One	$ 7249.35	-	-80.59	0.00	19.00	8.45
Bond Global	€ 1545.50	-	1.94	0.00	-2.28	0.77
Eurocroissance	€ 1272.91	-	-9.03	0.00	5.87	2.57
Far East	$ 934.10	-	-16.06	0.00	5.40	-4.98

Blue Whale Investment Funds ICAV (IRE)
www.bluewhale.co.uk, info@bluewhale.co.uk
FCA Recognised - Ireland UCITS

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Blue Whale Growth USD T	$ 9.89	-	0.08	-	20.87	-1.16

Brooks Macdonald International Fund Managers Limited (JER)
5 Anley Street, St Helier, Jersey, JE2 3QE
+44 (0) 1534 700 104 (Int.) +44 (0) 800 735 8000 (UK)
Brooks Macdonald International Investment Funds Limited

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Euro High Income	€ 1.1905	-	0.0004	2.50	0.28	-5.85
High Income	£ 0.6249	-	0.0001	3.77	5.98	-6.44
Sterling Bond	£ 1.2036	-	0.0003	2.06	5.62	-6.44

Brooks Macdonald International Multi Strategy Fund Limited

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Cautious Balanced Strategy	£ 1.2287	-	-0.0036	0.00	3.81	-0.75
Cautious Balanced Strategy A	£ 0.8778	-	-0.0025	1.78	4.36	-
Balanced Strategy	£ 0.9097	-	-0.0039	1.03	5.12	-
Balanced Strategy A	£ 0.9098	-	-0.0040	0.02	4.08	-
Growth Strategy	£ 1.9255	-	-0.0113	0.00	5.30	2.74
Growth Strategy A	£ 0.9195	-	-0.0053	-	4.66	-
High Growth Strategy	£ 2.7016	-	-0.0187	0.00	5.28	3.81
High Growth Strategy A	£ 0.9206	-	-0.0063	0.74	5.83	-
US$ Growth Strategy	$ 1.7148	-	-0.0019	0.00	12.26	-0.06

Dealing Daily. Initial Charge Nil for A classes and up to 2% for other classes

Brown Advisory Funds plc (IRL)
http://www.brownadvisory.com Tel: 020 3301 8130
FCA Recognised

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Global Leaders Fund USD C	$ 21.48	-	0.24	0.00	15.67	6.09
Global Leaders Sustainable Fund USD C	$ 12.94	-	0.16	0.00	13.81	5.72
Global Sustainable Total Return Bond GBP B	£ 9.26	-	0.02	0.91	-2.26	-
Global Sustainable Total Return Bond USD B	$ 9.55	-	0.02	0.00	-1.04	-
US Equity Growth Fund USD B	$ 50.50	-	0.52	0.00	15.43	-0.31
US Flexible Equity Fund USD B	$ 25.75	-	0.23	0.00	19.82	8.72
US Mid-Cap Growth Fund USD C	$ 17.04	-	0.14	0.00	6.57	-0.73
US Small Cap Blend Fund USD B	$ 21.22	-	0.10	0.00	3.56	6.84
US Smaller Companies Fund USD B	$ 33.63	-	0.15	0.00	0.60	1.67
US Sustainable Growth Fund USD C	$ 25.89	-	0.33	0.00	16.73	6.89
US Sustainable Value Fund USD C Acc	$ 10.59	-	0.04	-	-	-

CG Asset Management Limited (IRL)
25 Moorgate, London, EC2R 6AY
Dealing: Tel. +353 1434 5098 Fax. +353 1542 2859
FCA Recognised
CG Portfolio Fund Plc

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Absolute Return Cls M Inc	£ 131.30	131.89	-0.52	1.69	-2.39	1.94
Capital Gearing Portfolio GBP P	£ 35927.30	36125.39	-135.29	1.71	-3.29	2.07
Capital Gearing Portfolio GBP V	£ 174.73	175.70	-0.66	1.71	-3.29	2.08
Dollar Fund Cls D Inc	£ 159.09	159.57	0.60	1.28	-8.02	-2.18
Dollar Hedged GBP Inc	£ 88.57	88.84	0.63	1.27	-3.26	-4.86
Real Return Cls A Inc	£ 190.18	190.75	0.36	1.78	-7.43	-2.43

Chartered Asset Management Pte Ltd
Other International Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
CAM-GTF VCC	$ 291796.66	291796.67	-9009.67	-	-6.36	3.78
CAM GTi VCC	$ 780.49	-	-32.39	-	12.31	4.69
RAIC VCC	$ 1.64	1.64	0.03	2.06	5.74	-1.66

Consistent Unit Tst Mgt Co Ltd (1200)F (UK)
Stuart House, St John's Street, Peterborough, PE1 5DD
Dealing & Client Services 0345 850 8818
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Consistent UT Inc	56.69	56.69	0.13	1.69	-0.77	8.79
Consistent UT Acc	155.40	155.40	0.30	1.69	-0.70	8.79
Practical Investment Inc	228.20	228.20	-1.60	4.09	8.30	8.23
Practical Investment Acc	1486.00	1486.00	-11.00	4.09	8.31	7.60

Dodge & Cox Worldwide Funds (IRL)
48-49 Pall Mall, London SW1Y 5JG.
www.dodgeandcox.worldwide.com 020 3713 7664
FCA Recognised
Dodge & Cox Worldwide Funds plc - Global Bond Fund

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
EUR Accumulating Class	€ 16.12	-	-0.03	0.00	0.69	2.96
EUR Accumulating Class (H)	€ 10.33	-	0.02	0.00	3.20	-2.43
EUR Distributing Class	€ 11.27	-	-0.02	2.41	-1.67	1.18
EUR Distributing Class (H)	€ 7.16	-	0.02	2.50	0.75	-4.22
GBP Distributing Class	£ 11.99	-	-0.04	2.15	-2.18	0.64
GBP Distributing Class (H)	£ 7.76	-	0.02	2.47	2.44	-3.25
USD Accumulating Class	$ 12.23	-	0.03	0.00	5.98	-0.67

Dodge & Cox Worldwide Funds plc-Global Stock Fund

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
USD Accumulating Share Class	$ 30.53	-	-0.03	0.00	14.95	14.87
GBP Accumulating Share Class	£ 41.33	-	-0.29	0.00	8.53	17.30
GBP Distributing Share class	£ 27.50	-	-0.19	0.25	7.30	16.56
EUR Accumulating Share Class	€ 43.61	-	-0.22	0.00	9.19	19.09
GBP Distributing Class (H)	£ 13.91	-	-0.01	0.25	12.39	12.83

Dodge & Cox Worldwide Funds plc-U.S. Stock Fund

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
USD Accumulating Share Class	$ 38.50	-	0.06	0.00	8.70	14.35
GBP Accumulating Share Class	£ 49.29	-	-0.22	0.00	2.64	16.75
GBP Distributing Share Class	£ 29.33	-	-0.13	0.00	1.73	16.19
EUR Accumulating Share Class	€ 47.48	-	-0.12	0.00	3.26	18.53
GBP Distributing Class (H)	£ 15.07	-	0.02	0.16	6.69	12.52

Dragon Capital
www.dragoncapital.com
Fund information:info@dragoncapital.com
Other International Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Vietnam Equity (UCITS) Fund A USD	$ 27.49	-	-0.39	0.00	0.04	8.94

EdenTree Investment Management Ltd (UK)
PO Box 3733, Swindon, SN4 4BG, 0800 358 3010
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Amity Balanced For Charities A Inc	93.49	-	-1.58	5.65	9.51	4.55
Amity Global Equity Inc for Charities A Inc	153.00	-	-0.80	3.10	7.06	7.00
EdenTree European Equity Cls A Inc	322.50	-	-0.50	2.05	19.87	10.57
EdenTree European Equity Cls B Inc	325.90	-	-0.50	2.69	20.54	11.20
EdenTree Global Equity Cls A Inc	329.90	-	1.60	0.70	7.17	4.98
EdenTree Global Equity Cls B Inc	332.50	-	1.60	1.26	7.76	5.54
EdenTree Responsible and Sust S Dtd Bd B	92.50	-	0.10	2.08	3.62	-1.54
EdenTree Sterling Bond Cls A Inc	81.14	-	0.12	4.32	2.47	-4.86
EdenTree Sterling Bond Cls B Inc	92.03	-	0.14	4.31	3.11	-4.26
EdenTree UK Equity Cls A Inc	207.00	-	0.10	1.61	4.11	-0.72
EdenTree UK Equity Cls B Inc	206.40	-	0.10	2.19	4.71	-0.16
EdenTree UK Equity Opps Cls A Inc	265.50	-	0.60	1.28	7.45	1.40
EdenTree UK Equity Opps Cls B Inc	270.80	-	0.50	1.89	8.02	1.95
Edentree Global Impact Bond B	82.36	-	0.23	2.90	0.47	-
Edentree Green Future B Net Inc	98.04	-	0.80	0.82	1.99	-
EdenTree Managed Income Cls A Inc	115.60	-	-0.10	5.11	7.26	6.02
EdenTree Managed Income Cls B Inc	123.90	-	-0.10	5.10	7.83	6.57

Euronova Asset Management UK LLP (CYM)
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Smaller Cos Cls One Shares	€ 51.08	-	-0.41	0.00	2.80	0.34
Smaller Cos Cls Two Shares	€ 32.47	-	-0.26	0.00	2.27	-0.88
Smaller Cos Cls Three Shares	€ 16.20	-	-0.13	0.00	2.27	-1.19
Smaller Cos Cls Four Shares	€ 21.36	-	-0.17	0.00	2.30	-0.34

FIL Investment Services (UK) Limited (1200)F (UK)
Beech Gate, Millfield Lane, Lower Kingswood, Tadworth, KT20 6RP
Callfree: Private Clients 0800 414161
Broker Dealings: 0800 414 181
OEIC Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Allocator World Fund W-ACC-GBP	£ 2.69	-	0.01	1.15	3.78	7.74
American Fund W-ACC-GBP	£ 58.44	-	0.55	0.00	9.75	4.78
American Special Sits W-ACC-GBP	£ 22.74	-	0.02	0.64	-0.70	15.71
Asia Fund W-ACC-GBP	£ 14.63	-	0.05	0.83	-3.30	-4.43
Asia Pacific Ops W-Acc	£ 2.75	-	0.01	1.37	0.40	3.97
Asian Dividend Fund W-ACC-GBP	£ 2.23	-	0.01	3.10	-2.15	5.81
Cash Fund W-ACC-GBP	£ 1.06	-	0.00	1.77	4.05	1.50
China Consumer Fund W-ACC-GBP	£ 2.37	-	0.01	0.32	-13.46	-14.39
Emerging Mkts NAV	£ 7.21	-	-0.16	2.01	0.03	-6.80
Enhanced Income Fund W-INC-GBP	£ 0.81	-	0.00	6.88	7.38	9.44
European Fund W-ACC-GBP	£ 24.33	-	0.03	1.51	12.64	8.10
Extra Income Fund W-ACC-GBP	£ 1.27	-	0.00	4.60	6.09	-2.56
Global Dividend Fund W-ACC-GBP	£ 3.06	-	0.02	2.64	8.32	7.12
Global Enhanced Income W-ACC-GBP	£ 2.40	-	0.01	4.26	8.80	6.97
Global High Yield Fund W-ACC-GBP	£ 13.99	-	-0.01	5.10	5.74	-1.64
Global Property Fund W-ACC-GBP	£ 1.77	-	0.02	2.27	-10.38	-2.37
Global Special Sits W-ACC-GBP	£ 55.32	-	0.39	0.55	4.61	6.79
Index Emerging Markets P-ACC-GBP	£ 1.62	-	0.00	2.96	-1.95	-0.82
Index Europe ex UK P-ACC-GBP	£ 1.93	-	0.00	2.34	14.01	7.19
Index Japan P-ACC-GBP	£ 2.00	-	0.04	2.02	10.16	4.15
Index Pacific ex Japan P-Acc-GBP	£ 1.78	-	0.01	3.82	-4.33	4.53
Index Sterling Corporate Bond Fund P-ACC-GBP	£ 0.81	-	0.00	3.00	6.07	-6.59
Index UK Gilt Fund P-ACC-GBP	£ 0.70	-	0.00	2.11	-2.05	-11.40
Index UK P-ACC-GBP	£ 1.58	-	-0.01	3.38	9.03	10.35
Index US P-ACC-GBP	£ 3.69	-	0.02	1.27	7.43	11.92
Index World P-ACC-GBP	£ 2.83	-	0.02	1.62	7.48	9.87
Japan Fund W-ACC-GBP	£ 6.05	-	0.12	1.37	11.21	9.37
Japan Smaller Companies Fund W-ACC-GBP	£ 3.39	-	0.07	0.66	-1.57	-5.10
MoneyBuilder Balanced Fund W-ACC-GBP	£ 0.58	-	0.00	3.28	3.87	1.80
MoneyBuilder Dividend Fund W-INC-GBP	£ 1.23	-	-0.01	4.31	6.59	9.36
Multi Asset Allocator Adventurous Fund W-ACC-GBP	£ 2.13	-	0.01	1.03	2.75	4.98
Multi Asset Allocator Defensive Fund W-ACC-GBP	£ 1.28	-	0.00	1.20	-0.23	-3.08
Multi Asset Allocator Growth Fund W-ACC-GBP	£ 1.83	-	0.01	1.03	1.67	2.19
Multi Asset Allocator Strategic Fund W-ACC-GBP	£ 1.56	-	0.01	1.05	0.65	-0.55
Multi Asset Balanced Income Fund W-INC-GBP	£ 0.90	-	0.00	4.52	0.29	-1.46
Multi Asset Income & Growth Fund W-INC-GBP	£ 0.96	-	0.00	4.40	1.26	0.40
Multi Asset Income Fund W-INC-GBP	£ 0.82	-	0.00	5.58	-0.45	-3.25
Multi Asset Open Advent W-ACC-GBP	£ 1.72	-	0.00	1.54	1.71	5.40
Multi Asset Open Defen W-ACC-GBP	£ 1.29	-	0.00	2.11	-0.77	-0.64
Multi Asset Open Growth Fund W-ACC-GBP	£ 1.62	-	0.00	1.73	1.69	4.75
Multi Asset Open Strategic Fund W-ACC-GBP	£ 1.46	-	0.00	1.95	0.41	1.89
Open World Fund W-ACC-GBP	£ 2.29	-	0.01	0.82	2.56	8.58
Select 50 Balanced Fund PI-ACC-GBP	£ 1.13	-	0.00	1.38	2.37	0.94
Short Dated Corporate Bond Fund W-ACC-GBP	£ 10.77	-	0.01	3.71	6.62	-0.46
Special Situations Fund W-ACC-GBP	£ 41.94	-	0.00	3.28	7.15	13.02
Strategic Bond Fund W-ACC-GBP	£ 1.15	-	0.01	3.54	2.12	-5.09
Sustainable Asia Equity Fund W-ACC-GBP	£ 1.76	-	0.01	0.67	-4.81	-1.52
Sustainable Emerg Mkts Equity Fund A-ACC Shares	£ 1.52	-	0.01	-	-13.81	-0.91
Sustainable Emerg Mkts Equity Fund A-ACC Shares	£ 1.52	-	0.01	-	-13.81	-0.91
Sustainable European Equity Fund W-ACC-GBP	£ 5.34	-	0.03	1.04	10.24	2.23
Sustainable Global Equity Fund W-ACC-GBP	£ 32.43	-	0.21	0.42	-1.49	2.52
Sustainable MoneyBuilder Income Fund W-ACC-GBP	£ 12.03	-	0.03	4.33	5.25	-5.75
Sustainable Multi Asset Balanced Fund W-ACC-GBP	£ 0.92	-	0.00	1.57	1.62	-
Sustainable Multi Asset Conservative Fund W-ACC-GBP	£ 0.88	-	0.01	1.71	0.36	-
Sustainable Multi Asset Growth Fund W-ACC-GBP	£ 0.95	-	0.00	1.42	1.57	-
Sustainable Water & Waste W-ACC-GBP	£ 1.11	-	0.01	0.54	0.54	2.17
Sustainable Water & Waste W-INC-GBP	£ 1.09	-	0.01	0.54	0.52	2.18
UK Opportunities Fund W-ACC-GBP	227.50	-	-0.50	1.26	-1.47	1.63
UK Select Fund W-ACC-GBP	£ 3.67	-	0.00	2.47	6.41	7.08
UK Smaller Companies W-ACC-GBP	£ 3.45	-	-0.02	2.22	8.29	15.36

Findlay Park Funds Plc (IRL)
30 Herbert Street, Dublin 2, Ireland Tel: 020 7968 4900
FCA Recognised

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
American EUR Unhedged Class	€ 168.14	-	1.12	0.00	6.21	11.02
American Fund USD Class	$ 176.46	-	1.46	0.00	11.95	7.02
American Fund GBP Hedged	£ 85.94	-	0.71	0.00	10.26	5.76
American Fund GBP Unhedged	£ 145.63	-	0.76	0.00	5.37	9.38

Foord Asset Management
Website: www.foord.com - Email: info@foord.com
FCA Recognised - Luxembourg UCITS

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Foord International Fund | R	$ 45.53	-	-0.25	0.00	-2.46	1.84
Foord Global Equity Fund (Lux) | R	$ 15.63	-	-0.08	0.00	5.07	-

Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Foord Global Equity Fund (Sing) | B	$ 18.73	-	-0.09	0.00	5.81	0.50
Foord International Trust (Gsy)	$ 44.39	-	-0.24	0.00	-2.43	1.86

Fundsmith LLP (1200)F (UK)
PO Box 10846, Chelmsford, Essex, CM99 2BW 0330 123 1815
www.fundsmith.co.uk, enquiries@fundsmith.co.uk
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Fundsmith Equity T Acc	611.65	-	4.87	0.20	8.02	5.26
Fundsmith Equity T Inc	556.98	-	4.43	-	8.02	5.26

GAM
funds@gam.com, www.funds.gam.com
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
LAPIS GBL TOP 50 DIV.YLD-Na-D	£ 115.22	-	-0.72	2.94	-4.11	9.63
LAPIS GBL F OWD 50 DIV.YLD-Na-D	£ 98.08	-	-0.28	1.25	2.14	2.00
LAPIS GBL MED DEV 25.YLD-Na-D	£ 85.95	-	0.04	-	-	-

Guinness Global Investors

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Guinness Global Equity Income Y GBP Dist	£ 18.91	-	0.00	2.14	6.73	11.38
Guinness Global Innovators Y GBP Acc	£ 29.40	-	0.23	0.00	17.84	8.92
Guinness Sustainable Global Equity Y GBP Acc	£ 10.94	-	0.06	0.00	0.02	-

HPB Assurance Ltd
Anglo Intl House, Bank Hill, Douglas, Isle of Man, IM1 4LN 01638 563490
International Insurances

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Holiday Property Bond Ser 1	£ 0.49	-	0.00	0.00	0.41	-0.40
Holiday Property Bond Ser 2	£ 0.63	-	0.00	0.00	-	0.21

Hermes Property Unit Trust (UK)
Property & Other UK Unit Trusts

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Property	£ 6.13	6.58	-0.08	2.85	-17.54	-1.07

Janus Henderson Investors (UK)
PO Box 9023, Chelmsford, CM99 2WB Enquiries: 0800 832 832
www.janushenderson.com
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Janus Henderson Asia Pacific Capital Growth Fund A Acc	1089.00	-	3.00	0.06	-4.72	-5.83
Janus Henderson Asian Dividend Income Unit Trust Inc	73.28	-	0.15	5.78	-3.56	0.36
Janus Henderson Cautious Managed Fund A Acc	273.70	-	0.30	3.25	5.43	2.68
Janus Henderson Cautious Managed Fund A Inc	132.60	-	0.20	3.31	5.50	2.94
Janus Henderson China Opportunities Fund A Acc	1038.00	-	1.00	0.30	-15.27	-15.82
Janus Henderson Emerging Markets Opportunities Fund A Acc	189.90	-	0.50	0.76	-4.57	-3.62
Janus Henderson European Growth Fund A Acc	290.40	-	-0.70	0.76	11.22	5.32
Janus Henderson European Selected Opportunities Fund A Acc	2270.00	-	2.00	0.87	15.40	6.64
Janus Henderson Fixed Interest Monthly Income Fund Inc	16.06	-	0.07	4.83	-2.27	-6.50
Janus Henderson Global Equity Fund Acc	4243.00	-	14.00	0.00	0.35	1.88
Janus Henderson Global Equity Income Fund A Inc	63.46	-	0.15	3.44	4.68	7.51
Janus Henderson Global Sustainable Equity Fund A Inc	477.00	-	3.70	0.00	2.47	4.53
Janus Henderson Global Technology Leaders Fund A Acc	3296.00	-	42.00	0.00	20.07	6.90
Janus Henderson Instl UK Index Opportunities A Acc	£ 1.13	-	0.00	3.05	9.15	10.03
Janus Henderson Multi-Asset Absolute Return Fund A Acc	158.80	-	-0.40	0.83	0.38	3.24
Janus Henderson Multi-Manager Active Fund A Acc	250.60	-	0.10	-	2.62	2.47
Janus Henderson Multi-Manager Distribution Fund A Inc	119.20	-	-0.10	3.26	0.67	0.04
Janus Henderson Multi-Manager Diversified Fund A Acc	83.95	-	0.00	3.07	0.51	-2.28
Janus Henderson Multi-Manager Global Select Fund Acc	313.50	-	0.10	0.14	4.29	5.94
Janus Henderson Multi-Manager Income & Growth Fund A Acc	182.80	-	-0.30	3.19	1.50	0.46
Janus Henderson Multi-Manager Income & Growth Fund A Inc	139.60	-	-0.20	3.32	1.53	0.47
Janus Henderson Multi-Manager Managed Fund A Acc	306.50	-	0.40	0.31	2.68	2.24
Janus Henderson Multi-Manager Managed Fund A Inc	295.80	-	0.50	0.31	2.64	2.24
Janus Henderson Sterling Bond Unit Trust Acc	198.00	-	0.50	2.20	2.91	-7.37
Janus Henderson Sterling Bond Unit Trust Inc	53.39	-	0.13	2.23	2.90	-7.37
Janus Henderson Strategic Bond Fund A Inc	93.22	-	0.60	3.28	-6.70	-7.66
Janus Henderson Absolute Return Fund A Acc	172.30	-	0.10	0.65	7.09	2.14
Janus Henderson UK Alpha Fund A Acc	127.60	-	0.20	1.69	0.63	0.99
Janus Henderson UK Equity Income & Growth Fund A Inc	468.00	-	-2.00	4.80	3.90	10.03
Janus Henderson US Growth Fund A Acc	1867.00	-	22.00	-	12.95	5.95

Kleinwort Hambros Bank Limited (UK)
5TH Floor, 8 St James's Square, London, SW1Y 4JU
Dealing and enquiries: 033 0024 0785
Authorised Inv Funds
Unit Trust Manager/ACD - Host Capital

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
HC Kleinwort Hambros Growth A Acc	237.33	-	-0.36	1.36	4.39	2.11
HC Kleinwort Hambros Growth A Inc	215.33	-	-0.33	1.38	4.39	2.12
HC Kleinwort Hambros Equity Income A Inc	90.72	-	0.00	3.06	-0.88	6.56
HC Kleinwort Hambros Equity Income A Acc	185.92	-	-0.01	4.50	-0.88	6.56
HC Kleinwort Hambros Multi Asset Balanced A Acc	168.50	-	-0.13	0.81	3.27	-0.38
HC Kleinwort Hambros Multi Asset Balanced A Inc	159.27	-	-0.12	0.81	3.27	-0.38
HC Kleinwort Hambros Fixed Income A Acc	123.89	-	-0.03	3.44	-10.06	-2.73
HC Kleinwort Hambros Fixed Income A Inc	93.86	-	-0.02	3.44	-10.06	-2.73

Lothbury Property Trust (UK)
155 Bishopsgate, London EC2M 3TQ +44(0) 20 3551 4900
Property & Other UK Unit Trusts

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Lothbury Property Trust GBP	£ 1583.32	1626.81	-36.18	3.50	-23.80	-

M & G Securities (1200)F (UK)
PO Box 9038, Chelmsford, CM99 2XF
www.mandg.co.uk/charities Enq./Dealing: 0800 917 4472
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Charifund Inc	1379.84	-	-7.70	6.10	4.42	9.64
Charifund Acc	28253.95	-	-157.68	5.27	4.41	9.64
M&G Charibond Charities Fixed Interest Fund (Charibond) Inc	£ 1.05	-	0.00	3.35	4.50	-3.25
M&G Charibond Charities Fixed Interest Fund (Charibond) Acc	£ 38.58	-	0.08	2.84	4.49	-3.20
M&G Charity Multi Asset Fund Inc	£ 0.84	-	0.00	4.16	3.12	7.51
M&G Charity Multi Asset Fund Acc	£ 103.57	-	0.10	3.97	3.11	7.52

MMIP Investment Management Limited (GSY)
Regulated
Multi-Manager Investment Programmes PCC Limited

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
UK Equity Fd Cl A Series 01	£ 3080.40	3080.41	-231.75	-	-2.98	13.94
Diversified Absolute Rtn Fd USD Cl AF2	$ 1688.02	-	45.93	-	-1.51	1.32
Diversified Absolute Return Stlg Cell AF2	£ 1579.00	-	-1.96	-	0.70	2.45
Global Equity Fund A Lead Series	£ 1747.16	1747.16	-5.31	-	-1.04	6.13

MANAGED FUNDS SERVICE

Marwyn Asset Management Limited (CYM)
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Marwyn Value Investors	£329.72	-	-6.14	0.00	-	-7.17

McInroy & Wood Portfolios Limited (UK)
Easter Alderston, Haddington, EH41 3SF 01620 825867
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Balanced Fund Personal Class Units	5794.80	-	27.90	1.40	-1.52	3.21
Income Fund Personal Class Units	2780.60	-	3.80	2.40	0.93	4.81
Emerging Markets Fund Personal Class Units	2122.00	-	3.60	1.48	-7.86	1.07
Smaller Companies Fund Personal Class Units	5762.40	-	23.10	1.30	0.70	-0.96

MILLTRUST INTERNATIONAL

Milltrust International Managed Investments ICAV (IRL)
mimi@milltrust.com, +44(0)20 8123 8316 www.milltrust.com
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
British Innovation Fund	£121.92	-	2.89	0.00	-	-
MAI - Buy & Lease (Australia)	A$103.45	-	0.50	0.00	-16.53	1.41
MAI - Buy & Lease (New Zealand)	NZ$ 91.20	-	-6.06	0.00	-7.20	-2.67
Milltrust Global Emerging Markets Fund - Class A	$ 88.35	-	-1.60	0.00	3.86	-4.31

Milltrust International Managed Investments SPC
em@milltrust.com, +44(0)20 8123 8316, www.milltrust.com
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Milltrust Alaska Brazil Fund SP A	$ 90.21	-	0.39	0.00	8.90	13.86
Milltrust Laurium Africa Fund SP A	$ 90.89	-	0.26	0.00	3.81	5.26
Milltrust Marcellus India Fund SP	$132.95	-	-0.89	0.00	1.08	9.52
Milltrust Singular ASEAN Fund SP Founders	$123.16	-	-0.82	0.00	-0.29	-0.78
Milltrust SPARX Korea Equity Fund SP A	$110.29	-	-2.61	0.00	25.54	-6.95
Milltrust Xingtai China Fund SP A	$ 88.38	-	-0.58	0.00	2.93	-13.22
The Climate Impact Asia Fund SP A	$ 71.79	-	-0.22	0.00	0.30	-
The Climate Impact Asia Fund (Class B)	$ 70.92	-	-0.23	0.00	-0.20	-

Ministry of Justice Common Investment Funds (UK)
Property & Other UK Unit Trusts

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
The Equity Idx Tracker Fd Inc	1861.00	-	-9.00	2.50	5.04	7.17

Distribution Units

Mirabaud Asset Management (LUX)
www.mirabaud.com, marketing@mirabaud-am.com
Please find more details on our website: www.mirabaud-am.com
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Mir. - Glb Strat. Bd I USD	$114.23	-	0.22	0.00	3.01	-1.13
Mir. - DiscEur D Cap GBP	£149.71	-	-1.15	0.00	-3.64	-0.47
Mir. - UKEq HA Cap I GBP	£126.97	-	-0.12	0.00	-1.12	0.91

OASIS

Oasis Crescent Global Investment Funds (UK) ICVC (UK)
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Oasis Crescent Global Equity Fund USD A (Dist)	$ 33.75	-	-0.09	0.52	6.77	2.81
Oasis Crescent Global Income Fund USD A (Dist)	$ 9.80	-	-0.01	3.63	2.35	-0.80
Oasis Crescent Global Low Equity Fund USD D (Dist)	$ 11.81	-	0.01	1.21	2.44	0.52
Oasis Crescent Global Medium Equity Fund USD A (Dist)	$ 13.18	-	0.00	0.70	3.22	1.32
Oasis Crescent Global Property Equity Fund USD A (Dist)	$ 7.14	-	0.08	1.65	-0.63	-0.38
Oasis Crescent Global Short Term Income Fund USD A (Dist)	$ 0.93	-	0.00	2.72	2.94	0.05
Oasis Crescent Variable Fund GBP A (Dist)	£ 9.35	-	-0.03	0.68	-0.09	2.06

Omnia Fund Ltd
Other International Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Estimated NAV	$929.86	-	0.72	0.00	-2.69	16.70

Orbis Investments (U.K.) Limited (GBR)
28 Dorset Square, London, NW1 6QG
www.orbis.com 0800 358 2030
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Orbis OEIC Global Cautious Standard	£ 11.88	-	-0.04	0.00	2.38	6.31
Orbis OEIC Global Balanced Standard	£ 19.72	-	-0.12	0.36	7.01	12.36
Orbis OEIC Global Equity Standard	£ 23.33	-	-0.26	2.33	10.74	10.52

PLATINUM CAPITAL MANAGEMENT

Platinum Capital Management Ltd
Other International Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Platinum All Star Fund - A	$151.83	-	-	-	5.61	3.71
Platinum Global Growth UCITS Fund	$ 8.14	-	-0.09	0.00	3.56	-13.21
Platinum Essential Resources UCITS Fund SICAV USD Class E	$ 10.11	-	-0.06	0.00	-6.30	14.25
Platinum Global Dividend UCITS Fund	$ 42.74	-	-0.24	0.00	-2.58	-6.67

Polar Capital Funds Plc (IRL)
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Artificial Intelligence I USD ACC	$ 16.38	16.38	0.07	0.00	23.25	2.59
Asian Starts I USD Acc $	$ 13.45	-	-0.16	0.00	7.34	-4.58
Biotechnology I USD	$ 35.42	35.42	0.02	0.00	-3.41	0.72
China Stars I USD Acc $	$ 9.54	9.54	-0.07	0.00	-5.17	-12.48
Emerging Market Stars I USD Acc	$ 10.80	-	-0.09	0.00	5.16	-5.90
European Ex UK Inc EUR Acc	€ 14.90	14.90	-0.01	0.00	13.83	12.48
Financial Opps I USD	$ 13.35	-	-0.01	2.37	6.05	9.22
Global Convertible I USD	$ 13.06	13.06	-0.04	0.00	0.69	-4.32
Global Insurance I GBP	£ 10.53	-	0.10	0.00	9.73	16.74
Global Technology I USD	$ 76.60	-	0.81	0.00	21.15	0.20
Healthcare Blue Chip Fund I USD Acc	$ 18.05	18.05	0.03	0.00	5.13	6.20
Healthcare Dis I Acc USD $	$ 11.07	-	-0.04	0.00	-13.38	-4.35
Healthcare Opps I USD	$ 61.64	-	-0.11	0.00	-0.66	2.78
Income Opportunities B2 I GBP Acc	£ 2.98	2.98	-0.02	0.00	7.22	13.24
Japan Value I JPY	¥174.80	174.80	3.32	0.00	25.91	18.33
North American I USD	$ 34.55	34.55	0.20	0.00	11.34	9.67
Smart Energy I USD Acc $	$ 8.91	8.91	0.00	0.00	5.57	-
Smart Mobility I USD Acc $	$ 8.32	8.32	-0.03	0.00	5.72	-
UK Val Opp I GBP Acc	£ 12.02	12.02	-0.03	0.00	9.17	6.01

Private Fund Mgrs (Guernsey) Ltd (GSY)
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Monument Growth 26/09/2023	£534.47	539.55	-6.26	0.00	-1.14	4.53

Prusik Investment Management LLP (IRL)
Enquiries - 0207 493 1331
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Prusik Asian Equity Income B Dist	$168.01	-	-0.48	5.93	9.25	7.95
Prusik Asia Fund U Dist.	£194.72	-	0.12	0.00	-11.13	-1.94
Prusik Asia Sustainable Growth Fund A Acc	$ 82.04	-	0.02	0.00	-1.57	-

Purisima Investment Fds (UK) (1200)F (UK)
65 Gresham Street, London, EC2V 7NQ
Order Desk and Enquiries: 0345 922 0044
Authorised Inv Funds
Authorised Corporate Director - Link Fund Solutions

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Global Total Fd PCG A	414.32	-	2.24	0.17	14.43	8.29
Global Total Fd PCG B	408.31	-	2.21	0.00	14.15	8.02
Global Total Fd PCG INT	399.94	-	2.16	0.00	13.86	7.75

Purisima Investment Fds (CI) Ltd (JER)
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
PCG B ✠	308.66	-	-6.18	0.00	19.69	4.77
PCG C ✠	299.75	-	-6.01	0.00	19.43	4.55

ram ai

Ram Active Investments SA
www.ram-ai.com
Other International Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
RAM Systematic Emerg Markets Eq	$217.56	217.56	-0.61	-	13.48	5.57
RAM Systematic European Eq	€500.61	500.61	-3.71	-	3.78	4.35
RAM Systematic Funds Global Sustainable Income Eq	$145.75	145.75	0.24	0.00	5.89	7.82
RAM Systematic Long/Short European Eq	€152.43	152.43	-0.72	-	-1.78	2.24

Royal London (UK)
80 Fenchurch Street, London EC3M 4BY
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Royal London Sustainable Diversified A Inc	£ 2.32	-	0.01	1.25	7.60	0.03
Royal London Sustainable World A Inc	350.60	-	2.50	-	8.18	1.88
Royal London Corporate Bond Mth Income	72.15	-	0.13	4.83	6.83	-4.51
Royal London European Growth Trust	203.80	-	0.50	1.71	11.93	6.65
Royal London Sustainable Leaders A Inc	767.80	-	2.90	1.41	9.41	5.02
Royal London UK Growth Trust	603.00	-	-0.70	2.27	8.24	6.49
Royal London UK Income With Growth Trust	193.80	-	-0.40	4.97	5.84	7.41
Royal London US Growth Trust	410.90	-	3.00	0.00	12.76	13.86

Additional Funds Available
Please see www.royallondon.com for details

Ruffer LLP (1000)F (UK)
65 Gresham Street, London, EC2V 7NQ
Order Desk and Enquiries: 0345 601 9610
Authorised Inv Funds
Authorised Corporate Director - Link Fund Solutions

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
LF Ruffer Diversified Rtrn C Acc	97.73	-	-0.26	1.79	-3.58	-
LF Ruffer Diversified Rtrn C Inc	95.27	-	-0.25	1.81	-3.59	-
LF Ruffer Equity & General C Acc	564.50	-	-6.31	1.37	6.12	8.51
LF Ruffer Equity & General C Inc	503.15	-	-5.62	1.38	6.12	8.51
LF Ruffer Gold C Acc	224.42	-	-6.30	0.46	6.80	-12.30
LF Ruffer Gold C Inc	135.25	-	-3.80	0.45	6.79	-12.30
LF Ruffer Total Return C Acc	526.43	-	-3.99	2.48	-4.67	2.93
LF Ruffer Total Return C Inc	320.63	-	-2.43	2.52	-4.65	2.94

Rubrics Global UCITS Funds Plc (IRL)
www.rubricsam.com
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Rubrics Emerging Markets Fixed Income UCITS Fund	$136.29	-	0.07	0.00	4.05	-0.07
Rubrics Global Credit UCITS Fund	$ 16.73	-	0.02	0.00	1.95	-1.30
Rubrics Global Fixed Income UCITS Fund	$166.57	-	0.48	0.00	-0.95	-3.02

Scottish Friendly Asset Managers Ltd (UK)
Scottish Friendly Hse, 16 Blythswood Sq, Glasgow G2 4HJ 0141 275 5000
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Managed Growth ♦	348.50	-	-0.90	0.00	6.25	6.39
UK Growth ♦	394.20	-	-1.00	0.00	4.70	6.23

Slater Investments

Slater Investments Ltd (UK)
www.slaterinvestments.com; Tel: 0207 220 9460
FCA Recognised

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Slater Growth A Acc	572.37	572.37	-0.05	0.00	-8.41	-0.89
Slater Income A Inc	131.23	131.23	-0.74	5.22	1.45	10.61
Slater Recovery A Acc	297.43	297.43	-0.56	0.00	-9.14	2.89
Slater Artorius	256.48	256.48	-5.31	0.57	-7.90	2.58

STONEHAGE FLEMING
GLOBAL BEST IDEAS EQUITY FUND

Stonehage Fleming Investment Management Ltd (IRL)
www.stonehagefleming.com/gbi
enquiries@stonehagefleming.com
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
SF Global Best Ideas Eq B USD ACC	$236.75	-	2.93	0.00	17.01	1.91
SF Global Best Ideas Eq D GBP INC	£296.47	-	2.77	0.00	8.94	4.16

SUPERFUND INVEST BETTER

Superfund Asset Management GmbH
www.superfund.com, +43 (1) 247 00
Other International Funds
Other International Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Superfund Green Gold	$813.04	-	-18.44	0.00	-32.74	-17.06
Superfund Green Silver	$668.67	-	-20.21	0.00	-35.64	-19.42

Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Superfund Green US$	$659.13	-	-12.45	0.00	-33.31	-13.41

Thesis Unit Trust Management Limited (UK)
Exchange Building, St Johns Street, Chichester, West Sussex, PO19 1UP
Authorised Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
TM New Court Fund A 2011 Inc	£ 18.80	-	0.03	0.00	7.74	3.74
TM New Court Fund - A 2014 Acc	£ 18.96	-	0.03	0.00	7.73	3.74
TM New Court Equity Growth Fund - Inc	£ 20.58	-	0.08	0.00	9.41	4.51

TOSCAFUND

Toscafund Asset Management LLP (UK)
www.toscafund.com
Authorised Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Aptus Global Financials B Acc	£ 5.15	-	-0.03	3.81	15.60	16.84
Aptus Global Financials B Inc	£ 3.20	-	-0.02	3.94	15.59	18.27

Toscafund Asset Management LLP
www.toscafund.com

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Tosca A USD	$442.87	-	-0.06	0.00	-	11.22
Tosca Mid Cap GBP	£127.07	-	-6.15	0.00	-	-4.12
Tosca Opportunity B USD	$252.81	-	-15.03	0.00	-29.95	-19.96
Pegasus Fund Ltd A-1 GBP	£ 30.10	-	-1.48	0.00	-29.69	-4.35

TROY ASSET MANAGEMENT

Troy Asset Mgt (1200) (UK)
65 Gresham Street, London, EC2V 7NQ
Order Desk and Enquiries: 0345 608 0950
Authorised Inv Funds
Authorised Corporate Director - Link Fund Solutions
Trojan Investment Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Trojan Ethical O Acc	127.03	-	0.35	0.07	1.62	2.45
Trojan Ethical Global Inc O Acc	103.28	-	0.52	2.59	2.77	-
Trojan Ethical Global Inc O Inc	98.79	-	0.50	2.63	2.78	-
Trojan Ethical O Inc	126.93	-	0.34	0.08	1.82	2.52
Trojan Ethical Income O Acc	137.36	-	0.45	-	6.49	0.93
Trojan Ethical Income O Inc	112.05	-	0.36	-	6.49	0.93
Trojan Fund O Acc	379.56	-	0.88	0.26	-0.32	2.64
Trojan Fund O Inc	306.45	-	0.71	0.26	-0.32	2.64
Trojan Global Equity O Acc	514.95	-	4.88	0.00	11.38	7.20
Trojan Global Equity O Inc	424.87	-	4.02	0.00	11.38	7.20
Trojan Global Income O Acc	154.34	-	0.81	3.05	-0.14	5.06
Trojan Global Income O Inc	126.07	-	0.66	3.11	-0.15	5.06
Trojan Income O Acc	336.85	-	1.41	2.98	4.26	0.76
Trojan Income O Inc	161.89	-	0.68	3.06	4.26	0.76

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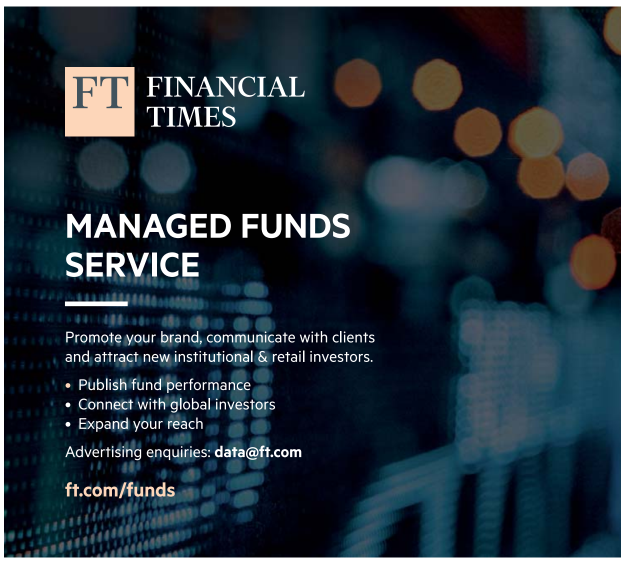

Guide to Data

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Prices are in pence unless otherwise indicated. The change, if shown, is the change on the previously quoted figure (not all funds update prices daily). Those designated $ with no prefix refer to US dollars. Yield percentage figures (in Tuesday to Saturday papers) allow for buying expenses. Prices of certain older insurance linked plans might be subject to capital gains tax on sales.
Guide to pricing of Authorised Investment Funds: (compiled with the assistance of the IMA. The Investment Association, Camomile Court 23 Camomile Street, London EC3A 7LL. Tel: +44 (0)20 7831 0898.)
OEIC: Open-Ended Investment Company. Similar to a unit trust but using a company rather than a trust structure.
Different share classes are issued to reflect a different currency, charging structure or type of holder.
Selling price: Also called bid price. The price at which units in a unit trust are sold by investors.
Buying price: Also called offer price. The price at which units in a unit trust are bought by investors. Includes manager's initial charge.
Single price: Based on a mid-market valuation of the underlying investments. The buying and selling price for shares of an OEIC and units of a single priced unit trust are the same.
Treatment of manager's periodic capital charge: The letter C denotes that the trust deducts all or part of the manager's/operator's periodic charge from capital, contact the manager/operator for full details of the effect of this course of action.
Exit Charges: The letter E denotes that an exit charge may be made when you sell units, contact the manager/operator for full details.

Time: Some funds give information about the timing of price quotes. The time shown alongside the fund manager's/operator's name is the valuation point for their unit trusts/OEICs, unless another time is indicated by the symbol alongside the individual unit trust/OEIC name.

The symbols are as follows: ✠ 0001 to 1100 hours; ♦ 1101 to 1400 hours; ▲ 1401 to 1700 hours; # 1701 to midnight. Daily dealing prices are set on the basis of the valuation point, a short period of time may elapse before prices become available. Historic pricing: The letter H denotes that the managers/operators will normally deal on the price set at the most recent valuation. The prices shown are the latest available before publication and may not be the current dealing levels because of an intervening portfolio revaluation or a switch to a forward pricing basis. The managers/operators must deal at a forward price on request, and may move to forward pricing at any time. Forward pricing: The letter F denotes that that managers/operators deal at the price to be set at the next valuation.
Investors can be given no definite price in advance of the purchase or sale being carried out. The prices appearing in the newspaper are the most recent provided by the managers/operators. Scheme particulars, prospectus, key features and reports: The most recent particulars and documents may be obtained free of charge from fund managers/operators. * Indicates funds which do not price on Fridays.
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ARTS

Timeline of a city reduced to ruin

FILM

Danny Leigh

20 Days in Mariupol
Mstyslav Chernov
★★★★★

Golda
Guy Nattiv
★★★☆☆

BlackBerry
Matt Johnson
★★★★☆

The Great Escaper
Oliver Parker
★★☆☆☆

"Wars start with silence." The remark comes from Ukrainian photojournalist Mstyslav Chernov on the eerie drive that begins his scalding documentary **20 Days in Mariupol**. As per the title, the film records from the inside the first stage of the Russian siege that marked an early front in the conflict. Day one is February 24, 2022. Chernov and two colleagues head for what will clearly be a key site in Vladimir Putin's "special military operation". The port is a grand prize, a news report says, as if a piece in a board game.

It is, or was, also a city of half a million. On that hushed February morning, they wondered, like Chernov, what they were about to witness.

You may have already seen some of the images shot by Chernov and his team, in part at least. By the seventh day of the siege, his voiceover says, without judgment: international reporters have left. Beyond that, the pictures of Mariupol that reached western TV mostly came from this operation. Here, though, is the fullest context: an apocalypse in increments, a timeline of how a modern European city, perhaps like the one where you are reading this, is rendered a skeletal ruin.

Would that blown-out apartment blocks were the most painful images. Chernov uses city hospitals as a base. They offer the closest thing to safety. They also become a hub of graphic suffering. The film asks us to look hard at what bombs do to human bodies. We come to recognise the particular howl of parents whose children lie dead on a gurney.

One doctor drily explains the logistics of medical care without water or electricity, and with dwindling stock of painkillers. "Film this!" another orders in fury at more abyssal horror. But Chernov leaves the hospital too, mapping the experience of ordinary people inside a prison city. The result can be strange and jarring. If the film was "only" a historical record of bravery, carried out in deep personal peril, it would still be valuable. And yet Chernov is determined to tell the whole truth of Mariupol, however bleak, surreal and all-too human. Looting takes hold amid shattered mannequins. There are verbal attacks on the camera crew from the traumatised.

The director questions his presence too, his faith in the old conviction that a war photographer is as vital as a doctor shaken. On day one, he blithely assures a local woman that Russia will not bomb civilians. Her street is ablaze that evening. But then, one lesson of these 20 days is how fast the unthinkable morphs into the everyday.

Above: '20 Days in Mariupol' shows the city under siege from within. Left: Helen Mirren as Israeli prime minister Golda Meir in 'Golda'
AP Photo/Mstyslav Chernov; Sean Gleason

And Chernov is aware too of the era in which he is working. We see a mass grave filled with children's bodies. Later comes a rare cut outside Mariupol. In New York, Russia's ambassador to the United Nations, Vasily Nebenzya, is questioned about the footage. He speaks airily of "information wars" before turning away, annoyed to be asked about the killing of babies.

The film doesn't flinch from its twin despairs. The savaging of Mariupol is one. The second is the line of well-amplified voices in and outside Russia who cry "fake" at the kind of images Chernov captured. Others, of course, simply wonder aloud when we might return to realpolitik as usual, 20 months on from these 20 days, and the silence over Mariupol.
In UK cinemas now

All people want to talk about with **Golda**, the stodgy biography of former Israeli prime minister Golda Meir, is the cosmetics. The issue is the heavy make-up worn by star Helen Mirren, which sparked heated discussion of whether gentile actors should play Jewish characters. Word-counts and life are short. That hot potato can go cold without me. But the hoo-ha was surely not the plan of Tel Aviv-born filmmaker Guy Nattiv. Consider it a lesson in living by the sword. His *Golda* is so skin-deep, it only feels right it should be judged on aesthetics.

The film is a snapshot of a leader at what should be breaking point. By odd coincidence, the timeframe is exactly that of *20 Days in Mariupol*: the 20 days of the 1973 Yom Kippur war, fought between Israel and Arab states led by Egypt and Syria. Unlike the Ukraine war, a grudging ceasefire followed, though with huge casualties on both sides. Meir would later be subject to an Israeli inquiry over her role in allowing the country to be attacked, which *Golda* uses as a framing device.

The movie's Meir faces these trials as she does all else, with a cigarette in hand. Sometimes two. The only person more hooked than Meir is Nattiv, for whom smoke is as vital as Mirren. A tobacco shroud hangs over every scene, to symbolic effect. It obscures the fact that other parts of the visual design are smart, if relentlessly stylised. Lack of time and options is reflected in tight little war rooms. But the script is repetitive too, dense with statistics and clichés.

Like Meir, a lot is being asked of Mirren. Never less than compelling, her work here feels true from scene to scene. (At least one is great: Henry Kissinger, outwitted over borscht.) But even this star needs more to crack the central mystery. Many other young Jewish girls saw friends and families terrorised by Cossacks in the 1900s. Only one became Golda Meir. Why? The movie leaves the question lost in that digital fog.
In UK cinemas now

In the end, we are measured by our biopics. Steve Jobs got the sheeny 2015 film of the same name, with Michael Fassbender speaking dialogue expensively hand-turned by Aaron Sorkin. And then there is **BlackBerry**, the cheerfully scuffed new movie about Mike Lazaridis, the Canadian innovator who made the world's favourite smartphone before the iPhone. If that legacy already sounds bittersweet, welcome to the film: the tale of a tech Icarus told in knockabout fashion.

We begin in 1996. The scene is the Ontario headquarters of Research In Motion, the company co-founded by Lazaridis (played by Jay Baruchel with the furrowed distraction of genius). By this telling at least, Lazaridis is a notably dreadful business mind. He can also make real a late-20th-century Holy Grail: a computer in your pocket.

Enter Jim Balsillie (Glenn Howerton), the chilly Harvard MBA who becomes his co-CEO. Here he appears as the kind of man who would be less troubled by being seen as an egotist than the fact that more of the film isn't about him.

How quickly time passes. The mismatch of Lazaridis and Balsillie creates chaotic workplace comedy; the unspoken punchline is that this dynamic built a company that as recently as 2010 claimed almost half the US smartphone market. (It should be said that while Balsillie has been a good sport, and Lazaridis silent, former colleagues of both have protested at the film's gonzo tone.)

But the real nostalgia is for that anything-is-possible 1990s moment before disruption became a brand. The change in the weather is clear when a strutting Balsillie gives delivery partners a Randian pitch about the BlackBerry as shortcut to self-reliance. The faces at the table look embarrassed. They want to know how it actually works. Type with your thumbs, Lazaridis advises. The scene could share a split screen with Stanley Kubrick's apes at the start of *2001: A Space Odyssey*.

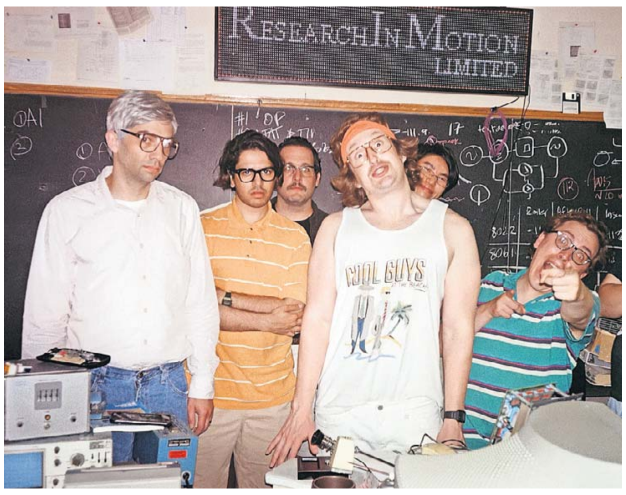
Yet despite the guffaws, the film is deeper than a mere morality play about villainous money men. Rubberneckers here for the second half of the rise-and-fall will get their share of hubris. But the star of the show is simple, cruel Darwinism. A glimpse of the real Steve Jobs introducing the iPhone brings the funny-painful comedy to the point where you can only watch through your fingers; then close to actual tragedy. Right time, right place is so rarely a permanent address.
In UK cinemas now

Some news events give filmmakers so much material, the challenge is what to leave out. Less so with **The Great Escaper**, an uncertain nugget of British feelgood spun out of a warming but slim human interest story. The facts of the matter are that in June 2014, events to mark the 70th anniversary of D-Day were attended in Normandy by one Bernard Jordan: an 89-year-old Royal Navy veteran who sneaked out of his Sussex care home and on to a cross-channel ferry. Now a movie about the episode arrives starring Michael Caine.

The mood is made instantly melancholy by the presence of Glenda Jackson as Jordan's mischievous wife Irene. In her last role before her death this summer, she is the best thing in the film, pin-sharp where it is out of focus. The actual breakout — a little oversold, it turns out — is done in minutes. The rest of the film is palpably nervous about how to keep itself going. The answer lies with disjointed D-Day flashbacks, and scenes in modern France stilted enough to muddy even the sense of wartime loss.

Caine is set adrift with only the barest trace of a character. The real Jordan, by contrast, was a former mayor of Hove, and apparently a very large local personality. No sign of that old goat here. Done a bunk, presumably.
In UK cinemas now

Left: Glenda Jackson, in her last film, with Michael Caine in 'The Great Escaper'. Below: Jay Baruchel, far left, plays tech innovator Mike Lazaridis in 'BlackBerry'



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FT BIG READ. SEMICONDUCTORS

Unfamiliar approaches to construction and labour are proving obstacles to the semiconductor group's ambitious Arizona project – putting both it and its employees on a steep learning curve.

By Kathrin Hille

TSMC gets a culture shock with its American dream

When Mino Morgese joined Taiwan Semiconductor Manufacturing Company in late 2021, his new employer arranged for a psychologist to prepare him and other newly hired US staff for the culture shock that might arise from working for a Taiwanese company.

Less than two years later, the Italian-born, US-trained engineer has embraced life at the world's largest semiconductor manufacturer – so much so that he is managing the move-in of machinery into the new fabrication plant, or fab, in Arizona at TSMC's first big manufacturing base in America.

"It doesn't happen often that such a huge fab is being built and that it's all cutting-edge technology," says Morgese, who feels pride in being one of the pioneers helping to build the plant.

Sitting on a site the size of 640 football pitches in the desert on the northern outskirts of Phoenix, a cluster of hulking buildings and giant cranes around them are visible from highway bridges and hillsides 30km away. Working at TSMC, Morgese says, "there's much more detail expected from us on every single level. [In previous jobs] we would not dig in as much as probably we should have."

TSMC commands the most state of the art chip production technology in operation in the world today, and controls 90 per cent of the global market for the most advanced made-to-order chips. But the Arizona project, where TSMC is building two fabs at a cost of $40bn, has given the company a culture shock of its own, and put both it and its employees on a steep learning curve.

So far, TSMC makes its most advanced chips exclusively in massive factories in Taiwan. Research and development staff nearby jump in to fix any problems, suppliers are clustered tightly around, and services providers who have been involved in building the company's fabs for decades respond to its every whim. That model has helped make TSMC more profitable than most other semiconductor manufacturers.

But growing anxiety among governments and industry in the US, Europe and Japan that a Chinese attack on Taiwan could leave the world without chip supplies is forcing the company to spread out its manufacturing footprint. Apart from Arizona, the company is also setting up a new plant in Japan and has committed to a €10bn joint-venture fab in Germany.

"Arizona is the first trial of our overseas mega-site development," TSMC chair Mark Liu said in September. "It is a learning process, of course."

Whether that trial goes well could make or break the US's quest to resurrect semiconductor production on its shores – an effort underpinned with subsidies worth $39bn for new fabs, which constitute part of the country's largest public investment in industrial policy since the second world war. The Arizona project could also determine if TSMC can transform itself into a true multinational.

But the first two years have been rough, threatening the project's timeline. The Taiwanese company has struggled with the American approach to construction and labour, says Dylan Patel, chief analyst at SemiAnalysis, a California-based chip industry research and consulting firm. "TSMC didn't quite get the culture."

In July, Liu told investors that the date for starting production would be pushed back from next year to 2025.

How big the Arizona factory will become is also unclear. The two fabs the company has announced so far would take its monthly capacity there to 60,000 of the wafers on which circuits are printed and microchips cut. That would make Arizona a medium-size plant but far smaller than the "gigafabs" with more than 100,000 wafers a month that the company operates in Taiwan.

TSMC has acquired enough land for four more expansion phases which could bring Arizona to that scale, but it has not publicly committed to that. Several executives at TSMC suppliers now say they do not believe the company will build out all six phases.

"This is where there is a lot of uncertainty and tension," says Caitlin Legacki, a former senior adviser to US commerce secretary Gina Raimondo who now runs a public affairs consultancy. "This is uncharted territory for TSMC."

Construction challenges

Building the first stage of the plant has been rife with challenges.

The company's way of awarding engineering contracts caused a lot of friction, leading to delays. In the US, chipmakers tend to choose three separate contractors for the office building, the central utility building which houses all electrical and plumbing infrastructure, and the cleanroom where the chip manufacturing itself happens. But TSMC typically subdivides the work in 20 or more packages.

> 'We believe [the Arizona plant] can be profitable, although not as profitable as our Taiwan fabs'
> **One TSMC executive**

"TSMC will slice those contracts very thinly for the sake of saving cost," says Charles Lee, co-chief executive at Topco, a Taiwanese company that manages certain chemicals and parts supplies for TSMC. "They are used to handling everything in a top-down manner. In Taiwan, contractors are used to following those orders obediently and adapting to quickly changing instructions, but in the US there will be miscommunication."

More recently, TSMC has struggled to find enough skilled workers for the installation of key advanced machinery. In June, the company sent 500 additional specialists from Taiwan to help in that phase. Several of the new arrivals gathered for a barbecue in late September at Aspire Pinnacle Peak, a gated apartment community 12km from the TSMC plant where they are staying.

Lin, an employee who asked to only be identified by his surname, says he had come to help set up extreme ultraviolet lithography, or EUV machines, the equipment made by Dutch company ASML that is needed to make the most cutting-edge chips.

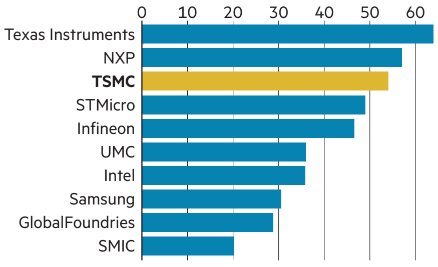
Some industry experts say there is indeed less expertise in the US with regard to EUV. Apart from Intel's technology development centre in Oregon, no US fabs have EUV installed yet. TSMC moved in its first EUV machine at its Arizona plant in May.

The delays in Arizona are also complicating things for TSMC's supply chain.

The chipmaker relies on many suppliers at its home base. "They have a very strong ecosystem in Taiwan – spare parts and machining shops, some of the bulk chemicals, move-in and move-out shops. But many of these are small companies, and the question is how many of those folks will move?" says Peter Hanbury, a semiconductor expert at consulting firm Bain.

TSMC ranks near the top of major semiconductor manufacturers' profitability

Gross margin, Q2 2023 (%)



Source: company reports

Several Taiwanese chemicals suppliers to TSMC, including Chang Chun Petrochemical, Kanto PPC and Topco, bought land in Casa Grande south of Phoenix with the intention of building plants and warehouses. For some of them, the fact they have to handle all planning work and permits for road connections and utilities themselves, as opposed to move-in ready plots in industrial parks back home, has come as a shock, together with drastically higher construction costs.

"TSMC's construction cost is several times higher in the US than in Taiwan, and the same multiple applies to us," says Vincent Liu, president of LCY, which makes cleaning chemicals used in TSMC's chip production. "The accurate calculation should be five times."

Fab capabilities

But the real challenge for TSMC, executives and analysts believe, will be to run the new fab as efficiently as its Taiwan-based ones.

"We believe it can be profitable, although not as profitable as our Taiwan fabs," says one TSMC executive. The company could replicate fab operations in the US that are already in mass production in Taiwan, the executive says, but is not confident that it could build up production in Arizona using technology only recently developed in its global research and development centre.

The company's success has been built on its ability to quickly raise yield – the ratio of chips without defects – at every new stage of process technology, which it has achieved by empowering engineers to experiment on the fab floor.

This contrasts with some other chipmakers' practices. Intel, for example, has for many years followed an approach called Copy EXACTLY!, under which each new fab must operate under the exact parameters transferred from the company's technology development centre in Oregon.

Any request to deviate from that has to be approved through a written process including experiments to demonstrate the merit of the proposed changes. The company needs this controlled process to ensure consistent products across its network of fabs, which operate in a number of US states and in countries from Ireland to Israel.

At TSMC, however, "fab workers have more autonomy to tweak dials to improve yield", Patel says. "That is what makes them achieve such efficiency, which Intel has never had."

Patel sees TSMC's model as the main reason why the company's process technology has a far longer lifespan than that of its rivals. But TSMC's approach relies to a large extent on having the R&D team, which develops new process technology, only an hour-long high-speed rail ride away. With 20 hours of flight time between Arizona and headquarters, new procedures are needed.

Engineers with experience at other chipmakers say it is possible to start to run satellite fabs over vast distances. "I have seen this in practice when we ramp up production in Ireland or Israel," says a senior engineer at Intel.

"The new fab will send a seed engineer to the technology development site in Oregon for anytime between a week or three months, so he can copy exactly what is going to be done. Then that person goes back and helps implement it on the other end."

As TSMC works towards getting its first Arizona fab ready, it has embraced aspects of the strict metrics mindset. Topco chief executive Lee says material supplies to Arizona are all exact copies of what is used in Fab 18, the site in the Taiwanese city of Tainan, where TSMC is running the same process technology that will be used in Arizona.

"They are even demanding that when we ship raw wafers to the Arizona fab, they must be from the same lot as those used in Fab 18," he says.

Yet Morgese's experience at TSMC indicates that the company, while taking a page out of Intel's book, is trying to preserve its more flexible approach.

Last year, Morgese spent six months at Fab 18. Hired as a manager for chemical-mechanical planarization, a kind of polishing process, he shadowed his counterpart in Fab 18 and then started solving related assignments on his own.

"When you transfer technology from Fab 18, your benchmark is how you match the yield from [that] fab," says Morgese. He and his fellow engineers who are preparing for the start of production in Arizona first ensure that all processes and tool settings exactly match those at the fab in Taiwan.

But once they begin putting silicon wafers through the equipment, "it's about making the small tweaks to see how we can optimise the process".

Hiring locally

But industry experts caution that the flexibility TSMC grants its Taiwan fab workers will be hard to replicate with a US workforce.

"You can empower fab workers more as long as they are that highly skilled, but you can't have that in the US," Patel says. Technicians in Taiwan typically have completed four years of engineering school, he adds. But engineering graduates in the US "have job opportunities that pay more and are more inspiring . . . than in a fab".

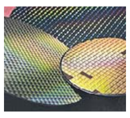
In Phoenix, that problem is clearly evident. TSMC has already hired more than 2,200 of the 4,500 staff it plans to employ there once the two fabs are in production. But almost half of those hired so far are assignees sent from Taiwan, according to two people familiar with the situation.

The company is trying to develop talent by supporting several local engineering schools, including at Arizona State University. Engineering students there view TSMC as an interesting company because of its manufacturing technology leadership, but are wary that working there could land them in a factory job without opportunities for innovative work.

"I would consider working at TSMC after I finish my masters next year because the pay is really good and their technology is really good," says Garima, a graduate student from India who would only give her first name. "But from friends who work there I know that the hours are too long and it is very hard to get leave." She claims that TSMC wants their workers to be obedient "robots", something she describes as a feature of Asian corporate culture.

Many young engineers are starting to view TSMC as a good career start but plan to jump ship early. "If you work at TSMC for the first few years and can withstand the culture of drilling, it's like you can join almost any other semiconductor company," says Smitha Swain, who is doing his PhD at ASU and has friends who have worked at the company. "When people join TSMC, they spend a certain time in Taiwan to get trained on the tools, and when they come back, all the local companies try to pay them more and hire these trained people, so it's an ongoing battle."

Production in Arizona is designed so all processes and tool settings match those at the fab in Taiwan



US president Joe Biden at the site of TSMC's new fab in Arizona, where Taiwanese and US labour cultures have clashed

FT montage/Getty Images

Michael Kozicki, a professor at ASU's school of electrical, computer and energy engineering, says TSMC faces a very different job fluidity environment in Arizona which the company is not used to in Taiwan, where it is among the most cherished employers.

Analysts say TSMC's challenges will differ across its new manufacturing locations. Construction of its Japan fab is going smoother than in the US. "Our cultures are closer to each other, and Japan has a similar manufacturing mindset and work ethic as we do," says a TSMC engineer familiar with both projects.

As the fabs in both Japan and Germany will be using more mature technologies than the Arizona site, both construction and initial production should pose fewer challenges, analysts say. "But I suspect Germany will be more difficult in terms of labour issues," says Hanbury, of Bain. "Consider the lessons from Arizona and magnify."

> 'There's much more detail expected from us on every single level. [In previous jobs] we would not dig in as much as probably we should have'
> **Engineer Mino Morgese, below**

TSMC is keenly aware of these deep-seated differences. Apart from the technical training, the company is putting foreign staff through language and culture training similar to the course Morgese underwent.

Over the past 12 months, about 6,000 TSMC employees have undergone intercultural training at TLI, a Taiwanese consultancy, according to people familiar with the situation.

This includes training domestic staff to work more effectively abroad. TLI has seen a surge in demand from Taiwanese companies under pressure to globalise as foreign customers and governments demand a diversification of tech supply chains away from China.

"Often they seek help just because Taiwanese management gives some orders and is surprised because there is a negative reaction from foreign staff," says Yvonne Wu, deputy general manager at TLI.

Even if TSMC's Arizona trial succeeds, the effect for diversifying global chip production away from Taiwan will remain limited due to the company's massive scale.

Analysts and executives estimate that after the first two phases of the Phoenix plant reach full capacity and the fabs in Japan and Germany are finished, total sales from production outside Taiwan are unlikely to account for more than 10 per cent of TSMC revenue.

But US observers say that is at least a first step towards rebuilding the country's chip manufacturing capability. "Having some capacity," says Legacki, the former commerce department adviser, "is better than zero."

The FT View

FINANCIAL TIMES
'Without fear and without favour'

ft.com/opinion

The brutal lesson of McCarthy's ousting

There is nothing to be gained from compromising with extremist Republicans

Kevin McCarthy was never exactly a child of the "Make America Great Again" revolution. But the former Speaker of the House of Representatives made repeated concessions to the most extreme members of the Republican party, and curried favour with them. And, in due course, they destroyed him. McCarthy was only elected Speaker after 15 votes in the House of Representatives — and he lasted just 269 days in the job. His was the shortest tenure as House Speaker in more than 140 years.

The inglorious rise and fall of McCarthy teaches an important lesson about doing deals with the Maga extremists and their leader — Donald Trump. It is pointless. Any Republican who is interested in actually making the government work — as opposed to destroying it — should learn from this episode.

To gain power, the former Speaker agreed that a single member of the House could trigger a "motion to vacate", which could lead to his ouster. In doing so, McCarthy handed a gun to the most extreme members of his party and, in due course, they used it. The former Speaker's offence was to agree a funding deal with the Democrats to prevent a shutdown of the government.

Any Republican candidate should now understand that it would be political suicide to agree a similar deal with the Maga ultras, led by Congressman Matt Gaetz. They are unappeasable. The likes of Gaetz need to be faced down and marginalised, not compromised with.

Given the Republicans' slim majority in the House of Representatives, that means a responsible candidate to succeed McCarthy will need some votes from Democrats to get elected. This also places some responsibility on the Democratic party. They need to consider what compromises they are willing to make to keep the US government functioning.

The stake for the US and the world are very high. The continued operation of the federal government — and Ukraine's ability to sustain its fight against Russia's invasion — may depend on getting Congress to agree a budget that lasts more than a few weeks. If that is to happen, the House of Representatives needs a Speaker.

The chaos in Congress is part of a broader disintegration of the American political system. Donald Trump remains the favourite for the Republican party nomination, despite facing four separate criminal cases and the possible loss of large parts of his business empire in a civil fraud case. With Trump as one of the two main candidates, the US presidential election will be chaotic. A leaderless Congress that cannot pass a budget would deepen the dark hole into which the US political system is descending.

> Democrats need to consider what deals they are willing to make to keep the US government functioning

But what compromises could the Democrats reasonably make in the search for a new Speaker? There are currently two frontrunners. Jim Jordan is far too close to the radicals to be an acceptable choice. His main rival, Steve Scalise, has — unlike Jordan — taken a responsible stance on Ukraine. But Scalise, like Jordan, has also backed the lie that the 2020 presidential election was stolen from Trump. That alone is likely to make it impossible for the Democrats to support him.

If both Scalise and Jordan are rejected, then other less irresponsible Republicans may come forward. The best solution would be for the next Speaker to draw on support from moderates in both parties. If a centrist Republican, willing to face down the Maga extremists, emerges, the Democrats should seize the opportunity. The American political system is flirting with self-destruction. If it tips over the edge, even members of Congress will not be immune from the consequences.

Opinion Companies

High hopes for the boom in entrepreneurship

Ann Kiernan

Soumaya Keynes

My pandemic pursuits included hula-hooping, song writing and covering my kitchen surfaces with aluminium foil to stop two kittens from stealing my meals. (It didn't work.) Others took a more lucrative approach: countries including the US, France and the UK saw a surge in business creation. That was surprising given that recessions tend to snuff out start-ups. The even bigger surprise is highlighted by a recent study: in America the boom has been sustained. Unfortunately, there are reasons to fear it will not last.

A resurgence in business dynamism would be very good news. Over the past few decades the US entrepreneurial spirit seems to have dimmed, as business entry rates have fallen and bigger, older incumbents have become more dominant. This trend has afflicted others; an OECD study of 18 countries found that between 2000 and 2015, average business entry rates fell by three percentage points. Reversing the trend could generate new cohorts of innovative companies.

> Countries such as the US, France and the UK saw a surge in business creation during the pandemic

Over the first few months of the pandemic, things got worse. But then in places, including the UK and France, company formation zoomed up. In August 2023, monthly applications from those the US census bureau saw as "likely employers" were almost 40 per cent higher than in 2019. There was initial doubt over whether this remarkable rise in applications would lead to real businesses. But as Ryan Decker of the Federal Reserve Board and John Haltiwanger of the University of Maryland document, they did.

So is this a corporate renaissance? Maybe not, if it's a temporary response to new patterns of demand linked to the shift to remote work. Decker and Haltiwanger see a "doughnut effect" of applications surging more in the outskirts than centres of big cities. Comparing 2019 with 2022, business registrations were roughly level in Manhattan, but elevated in the Bronx, Harlem and Brooklyn.

In another sign of a transitory pandemic-related shift, online retail accounted for around a quarter of Britain's surge in business applications, and only a slightly smaller chunk of America's. The beneficiary so far has been Etsy, whose global seller numbers exploded from 2.5mn in 2019 to 6.3mn today. Much as I appreciate the increasing availability of pumpkin soufflé-scented candles and hand-stitched bat costumes, it may not deliver the same oomph as, say, another Google.

Benjamin Pugsley of the University of Notre Dame raises a related concern: businesses in the incoming wave have been relatively small. As size is a predictor of survival, that is ominous. And sectors that saw disproportionate growth tended to be those with businesses that start small and stay small, including residential construction, building services and personal care.

In countries other than the US, it seems that business entry is already fading. A study by Saleem Bahaj and Sophie Piton of the Bank of England and Anthony Savagar of the University of Kent found that UK companies created during the pandemic were less likely to post jobs and more likely to dissolve — business entry is now back at its pre-pandemic trend. And data from the OECD suggests that in France, Sweden and the Netherlands the peak in new companies has passed.

It is possible that the US will defy trends. Perhaps its shock has lasted longer because more generous cash support gave people the funds to be their own boss. There is evidence that early stimulus cheques supported entrepreneurship, particularly in disproportionately black neighbourhoods. Or perhaps the hotter US economy made more people confident about customers. But in both cases, the outlook does not look promising. Pandemic-era savings are fading fast, and the Federal Reserve is doing its best to cool demand.

If you're in an optimistic mood and all this is a bit gloomy, there are a few glimmers of hope. The US has seen a post-pandemic increase in applications from the potentially innovative high-tech "professional, scientific and technical services" category, which includes architectural services, computer systems design and scientific research and development. The increase happened before the Inflation Reduction Act was passed, so industrial policy wasn't the trigger. It could help to sustain the boom.

A final fact to cling to is that it doesn't matter if a lot of the new companies are tiddlers. All we need is a few that are super innovative, grow quickly and shake the incumbents out of their complacency. So far it doesn't look as if productivity has risen out of its pre-pandemic malaise, though it's still a bit too early to tell. I'll be hoping for the best, but expecting the worst.

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Sunak's cost analysis ignores the wider benefits of HS2

Prime Minister Rishi Sunak has cancelled the Manchester leg of Britain's high-speed rail project HS2, a shovel-ready project, where the designs were complete, planning approvals were in place and the land acquired (Report, October 5).

Sunak believes it is the responsible decision. He has substituted a shoal of lesser projects, few of which are anywhere near the investment starting gate. His decision, which will see a fire sale of all the land assembled for HS2, is short term, anti-investment and lacks vision. Sunak says his decision is rooted in analysis. But it reflects the power of cost benefit analysis over visionary planning. What counts for Sunak are the costs — and a calculus of benefits driven by aggregated time savings, monetised and discounted.

Look beyond the logic of cost benefit analysis and think about the wider economic benefits. With Northern Powerhouse Rail, HS2 would bring cities such as Manchester and Liverpool to within about an hour's travel to central London (closer than many parts of the south-east) in big comfortable trains, smooth running and with plenty of working space.

Using hybrid Zoom technology and occasional travel it could open the door for the northern business service sector — law, wealth management, creatives, design, research and much else — to break into London markets, with the huge benefits of low costs, low staff turnover and young employees who can actually afford to buy a home for their families.

Cancelling HS2 has prejudiced that opportunity. It is as logical as finishing the M1 and refusing to build the M6.

Professor Ian Wray
Heseltine Institute for Public Policy, Practice and Place
University of Liverpool, UK

Corporate investigators provide invaluable service

Anjli Raval's piece "Why personal conduct is a growing risk for business" (Work & Careers, October 2) does an excellent job of describing the increasingly vexed point where individual behaviour meets corporate reputation. But it does a disservice to the corporate investigations sector, which carries out invaluable and careful work to help companies navigate the proliferating risks.

We are not "corporate spies", and the better among us don't rummage in people's private lives; our role is to find out everything a board can know about a critical appointment, ethically and efficiently, in good time. That means scouring the public domain, making creative connections, and speaking to the people who know. No mystery, but a reliable route to better-informed decisions that make companies and their culture more robust.

Chris Morgan Jones
Regional Managing Director, Emea, Nardello & Co, London EC4, UK

Why worries on money market funds are overdone

William Cohan's opinion piece ("Vigilance is needed on money market funds", On Wall Street, September 23) worries that money market funds currently offer high yields only in exchange for higher risk. And, he suggests, investors who have "swarmed" to money market funds don't understand this. Really? Let's check the facts.

First, yields on money market funds have risen sharply in recent months not because of risk, but because of monetary policy. Federal Reserve tightening over the past 18 months has raised US short-term interest rates to more than 5 per cent. Money market funds invest in short-term securities and pass along the market-based yields on those investments to investors. The FT itself made this point in a recent article.

Second, so far in 2023, money market fund assets have grown about $900bn. The vast majority of this is invested in short-term Treasury and agency securities, investments in the Fed's reverse repurchase agreement RRP facility, and to a lesser extent in commercial paper issued by global, systemically important banks (G-SIBs). One might have thought Cohan would view that as a source of strength for money market funds, considering his apparent predilection for government safety nets.

Third, have investors "swarmed" into money market funds because they have what Cohan refers to as a "human instinct to creep up the risk scale in exchange for a higher yield"? No. Arguably, it's the reverse.

Investors turned to money market funds following the collapse of Silicon Valley Bank in March this year. More broadly, by choosing money market funds, investors have gained higher yields while reducing the interest rate risk of holding long-term bonds and the volatility risk of holding stocks.

Fourth, average bank deposit rates remain well below money market fund yields. Unless deposit rates become more competitive — and regulatory headwinds including bank capital standards and Federal Deposit Insurance Corporation insurance premiums work against that — investors will favour the money market fund value proposition.

Money market fund investors are not the simplistic actors Cohan suggests. They recognise that such funds offer a convenient, conservatively managed, diversified way of getting exposure to the attractive short-term yields the Fed has provided.

Sean Collins
Chief Economist, Investment Company Institute, Washington, DC, US

EU states need to accept Kosovo isn't a Serb colony

The Albanian prime minister Edi Rama is quite right that Vladimir Putin, aided by Serbia's strong man Aleksandar Vučić, would like to create a "little Donbas" in northern Kosovo ("Albania presses Nato to reassert control in northern Kosovo", Interview, October 4)

Rama calls for France, Germany and the US to re-engage. They have tried and failed. Four Nato and EU member states — Spain, Greece, Slovakia and Romania — back the Putin-Vučić line of not recognising Kosovo. This weakens the new Balkan state in asserting authority over its territory.

Perhaps France's Emmanuel Macron, German chancellor Olaf Scholz and the US president Joe Biden could have a word with their counterparts in Madrid, Athens, Bratislava and Bucharest and urge these Nato and EU leaders to drop the fantasy that Kosovo does not exist and might one day return to being a colony of Belgrade.

Denis MacShane
UK Minister for the Balkans 2001-2005
London SW1, UK

West may well need Russia — to stabilise its old empire

As a result of the war in Ukraine, Alexander Gabuev rightly notes that Russia is losing its ability to play the role of regional power broker ("Nagorno-Karabakh shows Russia has lost control of its near-abroad", Opinion, October 3).

Gabuev's analysis begs the question of which actors and what actions — if any — will replace Moscow's diminished influence and stabilising role in the South Caucasus and Central Asia, and what are the consequences for local people if they do not.

While acknowledging that Azerbaijan's recent offensive to end, once and for all, the de facto Nagorno-Karabakh republic is "a powerful illustration of the sad reality that 'might makes right'", Gabuev appears to accept the likelihood of large-scale violence and of increased suffering in regions long under Russia's influence as the new normal. "The destabilising effects", he concludes, "will continue to be felt across the vast Eurasian landmass".

This raises the question of whether it may in fact be in the interest of the US and the west to see Russia continue to act as a stabilising force in parts of the region.

Many in the west have, for understandable reasons, long been hostile to Russian power and sway across the former Soviet Union. The latest manifestation is the Biden administration's attempts to increase US influence in Central Asia.

Commentators have called on the administration to "seize its strategic opportunity" to challenge Russian and Chinese influence and "strike at Putin's soft underbelly" there. However, the reality is that the US and Nato have neither the will nor the ability to provide security in the regions themselves.

Therefore, unfortunately, when Moscow reduces its involvement in these regions the effects on the local populations are often tragic and run counter to the supposed foundations of the "rules-based order" promoted with increased vigour by Washington and Brussels.

To attack Russian and Chinese influence in this region risks repeating one of the worst and cruellest effects of the cold war, by dragging local countries into wider geopolitical conflicts in which they and their peoples have no interest.

If western countries instead wish to play a positive role in Central Asia and the Caucasus, they will have to work with the presence of Russian, Chinese and indeed Iranian influence, and not against it.

These countries have after all been there for a lot longer than America has.

Artin DerSimonian
Junior Research Fellow, Eurasia Programme, Quincy Institute for Responsible Statecraft, Washington, DC, US

UK success is not because it's become multicultural

Does Rishi Sunak's description of Britain as a "fantastic multi-ethnic democracy" equate to the claim that "multiculturalism works", as the headline on Stephen Bush's column suggests ("Sunak is right: UK shows multiculturalism works", Opinion, October 3)?

There is no doubt that Britain has become a successful multi-ethnic country. Whether it has done so by becoming multicultural is another matter entirely. Has it perhaps done so more by immigrants' efforts to fit in with the British way of life, which is notably fair and tolerant and therefore not overly demanding of newcomers?

Of course, the British people have enthusiastically signed up for many of the wonderful novelties immigrants have introduced into the country — among them food, music and language. That does not, in my opinion, mean that Britain has become multicultural. To be sure, indigenous residents and immigrants have all been changed by the process.

But pouring milk into a cup of tea still produces a cup of tea rather than a cup of separate milk and tea. Is "tea with milk" perhaps how we should view the changes in British society?

Michael Winckless
Bangkok, Thailand

Remember Brunel's great railway was delayed too

To put HS2 in perspective following this week's announcement from Rishi Sunak to scrap the Manchester leg (Report, October 5), you may be amused by a charming Victorian watercolour of Bradford-on-Avon (Wiltshire), painted by Elizabeth Tackle in 1848.

When Tackle captured the scene, Bradford-on-Avon railway station had just been built, following Isambard Kingdom Brunel's great master plan for the Great Western Railway between Bristol and London.

In the painting, a print of which is in Bradford-on-Avon museum, you can see the station, slightly to the right of centre, almost behind a group of trees. The two platforms plus obligatory ticket office and waiting rooms however are marooned in a field between the Avon river and the efficient modern freight transport alternative then in active use: the Kennet and Avon Canal. The railway track did not arrive until 1857, almost a decade later. Was that delay because of lack of financial backing, or delays in planning consent . . . ?

Kate Nottage
Bradford-on-Avon, Wiltshire, UK

Clarification

● Airbnb does not have immediate plans to develop car rentals as wrongly suggested in an article on October 5.

Opinion

Lessons for China from Japan's lost decade

Masazumi Wakatabe

China's recent economic slowdown has elicited comparison with Japan in the 1990s and its subsequent long stagnation with deflation. But are there real parallels to be drawn between the two countries?

The similarities are abundant. China has problems in the real estate sector. Asset prices have been falling. As the unemployment rate rises, especially among young people, the country seems close to deflation.

Some concerns are clearly overblown. China's core Consumer Price Index is still rising, so it is premature to declare a Japan-like deflation. What China is experiencing right now is not just the collapse of overvalued asset prices, but the end of a growth model which has been the engine of its economy for the past 30 years.

In this sense it is better to compare China today with Japan in the 1970s, when its real growth rate halved as the era of internal migration to its cities came to an end. China can still achieve growth of four or five per cent, reminiscent of 1970s Japan, not the disastrous 1990s.

Nonetheless, China's current growth rate is clearly well below its potential, and that *is* reminiscent of 1990s Japan. This is not due to demographics — when youth unemployment is increasing, the problem is not a lack of young people. It is worth recalling that 1990s Japan also had underemployment even with ageing demographics.

So what should the Chinese authorities do to revive economic growth? There are five essential steps. The top priority should be debt restructuring. The pivotal moment for Japan, after the bubble burst, was the initiative to identify and tackle non-performing loans by then minister of Financial Affairs Heizo Takenaka. The Chinese authorities need to calculate the actual net debt across corporate, financial and local government sectors. This is a daunting task given the lack of transparent information about corporate balance sheets and local government's heavy reliance on real estate revenue. China needs its own Takenaka to take the issue in hand.

Second, China needs an economic stimulus. The task of identifying the amount of net debt becomes increasingly difficult when macroeconomic

> The pivotal moment, after the bubble burst, was Tokyo's initiative to tackle non-performing loans

conditions keep deteriorating and asset prices keep falling. The stimulus needs to be co-ordinated, wide-ranging and sustained to counter the slowdown. The necessary scale of the stimulus will get bigger the longer it is delayed. Monetary-fiscal policy co-ordination is required: given the heightened uncertainty, weak consumer confidence and chronic excess saving, the best policy would be money-financed fiscal transfers, or 'helicopter money'. The government could cut taxes or support households, while the People's Bank of China could pursue more aggressive monetary easing.

Third, China should refocus its overall economic policy stance towards growth. Indeed, the economic transformation towards IT, education, and services was already under way before the Chinese government tightened regulations on these potential growth engines. It is time to course correct and loosen the restrictions.

Fourth, beware dangerous policy ideas. Economic crisis breeds debate. Japan had plenty of economic debates, but some policy ideas were counterproductive and downright dangerous. During its long stagnation, Japan witnessed the rise of austerity policy thinking and the downplaying or neglect of standard macroeconomic policy. Never underestimate the perils of asset and general price deflation and do not wait until deflation becomes evident. Debt restructuring and market-orientated reforms are necessary, but they cannot be delivered without the support of macroeconomic policy.

Finally, but most importantly, action needs political will. Japanese policymakers were slow to tackle their problems. They engineered the bursting of the asset price bubble in 1989 to 1990 and welcomed asset price and general deflation even well into the early 2000s. The economy recovered somewhat between 2004 and 2007 during Junichiro Koizumi's premiership and the first Shinzo Abe administration, when Japan's non-performing loans problem was finally resolved with the help of improved macroeconomic conditions.

But it took Abe's determination in 2012, approximately two decades after the onset of Japanese stagnation, to deliver a co-ordinated and sustained stimulus policy package. In this sense, China needs not only its own Takenaka, but a Koizumi and Abe as well.

The writer is the former deputy governor of the Bank of Japan and is now professor of economics at Waseda University

End of Nagorno-Karabakh war holds hope for new beginnings

Nigel Gould-Davies

After its latest military offensive two weeks ago, Azerbaijan is set to regain control of Nagorno-Karabakh, the enclave within its borders controlled until now by neighbouring Armenia. This will bring to an end a conflict that began in 1988, has preoccupied both combatants, and is a key driver of international engagement with the Caucasus. The outcome holds strategic implications for the west.

For Azerbaijan, this is a total victory won by the cruel, hard methods of military force and economic blockade, together with training and equipment from Turkey. For Armenia, it is a devastating defeat that exposes its failure to prepare diplomatically or militarily for the rising power of an adversary three times its size, and its reliance instead on a contradictory mix of Russian security guarantees, which were not honoured, and western sympathy, which proved merely rhetorical.

For the west, the end of the war shows outcomes it calls "unacceptable" cannot be stopped by words and meetings alone. The limits of its mediation and soft power have been painfully exposed. Western attention is now focused on humanitarian concerns: the flight of more than 100,000 Armenians from the enclave, and the fate of those few who remain in it. But it should urgently consider the longer-term strategic implications too. The end of the war has the potential to transform the region and forge new relationships within it.

Armenia, disillusioned with Russia, its supposed protector, has just taken part in military exercises with US forces.

> It is time to build a region defined by the interests of the future rather than the agonies of the past

To Moscow's fury, it also plans to join the International Criminal Court, which this year indicted Vladimir Putin for war crimes. The west should help Yerevan provide welfare for those arriving from Azerbaijan — which will add up to 4 per cent to Armenia's population and strain resources.

But the key question is how relations between the west and Azerbaijan will develop. The west's energy ties with the oil and gas-rich country are more important than ever as it weans itself off Russian supplies. Now there are new security possibilities, especially in light of the war in Ukraine. Azerbaijan is the only country that borders Russia and Iran, two western adversaries whose ever-closer relations evoke growing alarm. Azerbaijan's ties with Turkey, a Nato member that provides weapons to Ukraine, means it is receiving military training according to the alliance's standards. All this offers the potential for a deeper relationship, if the west has the strategic imagination to grasp it.

But much depends on Azerbaijan's choices. These will determine whether the west's engagement is limited and transactional or could be deeper and more sustained. Baku would do well to recall Churchill's maxim: "In victory, magnanimity." Armenians who choose to remain in Azerbaijan must be protected and allowed to live in safety. Baku should be ready to sign an early peace treaty. It must renounce any designs on Armenia's sovereignty.

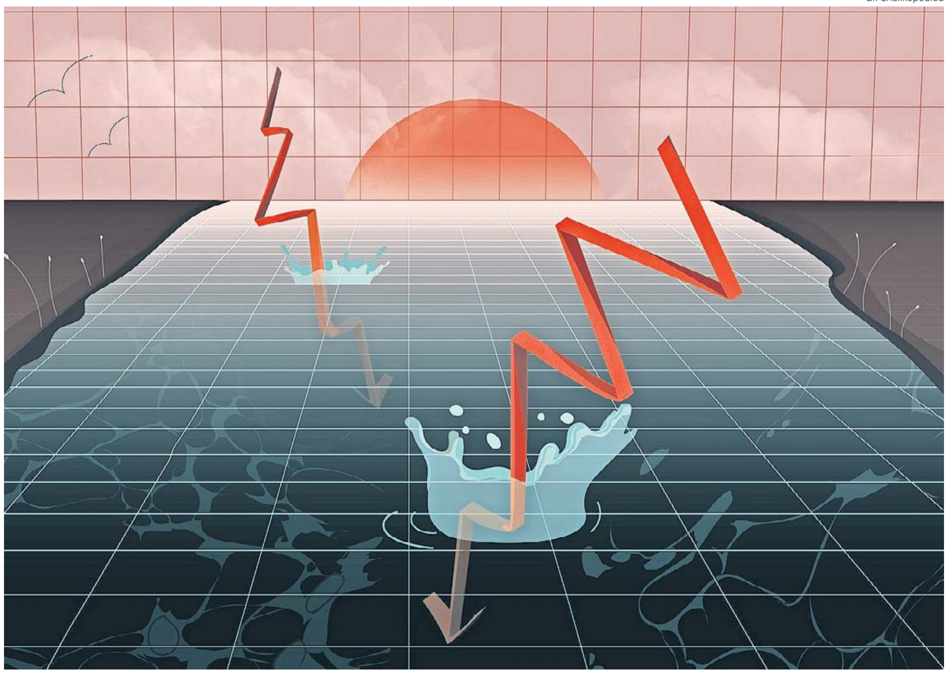
Beyond this, all parties should explore economic opportunities denied them by the conflict. France and Germany fought three wars in 70 years yet were able to begin reconciliation through integration. Armenia and Azerbaijan, which have fought three wars in half that time, could learn from this — and the EU could help.

The goal should be to build a region defined by the interests of the future rather than the agonies of the past. Secure, stable and constructive relations between Armenia, Azerbaijan, Turkey and the west would not only be good in themselves, but unwelcome to Russia, which thrives on instability. The west should be ready to support this. Azerbaijan's choices will be critical. After decades of mutual enmity, generosity towards defeated Armenia could reap disproportionate rewards. The next move is Baku's.

The writer is senior fellow at the International Institute for Strategic Studies and a former UK ambassador to Belarus

Bond market swings put us in uncharted seas

Efi Chalikopoulou



INVESTMENTS

Gillian Tett

Until recently, the so-called "$TLT" exchange traded fund — which tracks long-term Treasuries — seemed dull as ditchwater. The price used to move in tiny increments with modest trading volumes, making it suitable for widows and orphans — risk-averse investors, in other words.

Not now. On Tuesday there were 71mn daily trades of the ETF, many times higher than usual. And the price has fallen 3 per cent this week alone, and is now 20 per cent down on the last six months, and 50 per cent since early 2020. That exceeds even the stock market rout after the dotcom bubble.

What should bruised investors conclude? There are five key points to understand. The first is that the current bond market pattern is not — repeat, *not* — just a replay of what we have seen in recent years. When the US Federal Reserve started hiking rates 18 months ago, short-dated yields rose as short-term bond prices fell (these move inversely.)

However, long-term rates did not surge, apparently because investors assumed that inflation and growth would eventually fall.

This year, however, those long rates have jumped, even though short rates have stabilised (seemingly because central bank tightening is almost over). That suggests that long rates are moving because of deeper structural shifts in the supply and demand for bonds; so it is not "just" about the Fed.

The second key point is that while the pace of bond price falls is startling by historical standards, the actual level of rates is not. On the contrary, during most of the 20th century, a 4.8 per cent 10-year Treasury yield was considered normal, if not benign.

Thus what is most bizarre today, from a long-term perspective, is not that yields are rising, but that they were so low during the past decade. Even odder, the yield curve is still slightly inverted (ie short rates are higher than longer ones.)

Third, if you want to understand the structural shifts driving the rate swing, don't just look at economic data. Yes, investors have recently raised their projections for future inflation and growth. And, yes, concern is mounting about America's debt, which has doubled to $33tn since 2011 amid political gridlock.

But market metrics of inflation expectations have actually not changed recently. And that debt pile has been sitting in plain sight for a long time; hence the Congressional dramas.

So that leads to a fourth key point: the recent bond falls are putting a spotlight on the behaviour of non-American investors.

One factor that seems to be affecting market sentiment is a fear that Japanese investors could sell Treasuries to buy yen assets if the Bank of Japan lets its 10-year yield rise above 1 per cent.

Another is China. Some analysts, such as Torsten Slok of Apollo, think that the Chinese are reducing US Treasury purchases, either due to geopolitical tensions or because of financial strains at home. And the Treasury International Capital ("TIC") data seems to support this: Chinese holdings fell from $939bn to $821bn over the past year.

But Brad Setser of the Council on Foreign Relations thinks this TIC series is misleading: not only are the Chinese buying US agency bonds, but they are buying US assets through European entities such as Euroclear, that are excluded. If included, he thinks "China's reported holdings of US assets look to be basically stable at between $1.8tn and $1.9tn."

> As in 2007, a heavily interconnected system is exposed to what happens in a murky corner of finance

Either way, the most important point is that nobody knows for sure, since the data is woefully opaque.

Markets today thus echo the risk pattern of 2007: a heavily interconnected system is highly exposed to developments in a murky, little-understood corner of finance — but instead of subprime mortgages, the issue is Beijing's appetite for Treasuries.

The fifth point is that amid this uncertainty there is at least one issue that is crystal clear: what is happening is bad news for the White House.

Savvy corporate treasurers have already scrambled to restructure their debt to lock in the past decade's low borrowing costs, for as long as possible. But Janet Yellen, US Treasury secretary, has not been able to do this. That means debt servicing costs will soon explode; indeed, they are already doing so, prompting chatter about bond "vigilantes".

Some investors think (or pray) that this fiscal squeeze will prod the Fed to cut short-term rates.

Others think the Fed will be forced to act to prevent a replay of this spring's Silicon Valley Bank drama; tumbling bond prices are once again creating losses in bank and insurance portfolios.

And if the Fed does slash short-term rates, that might persuade leveraged investors such as hedge funds to start buying long-term Treasuries again.

But, as bond guru Bill Gross notes, it is hard to imagine the Fed cutting rates if inflation stays above 3 per cent. In that case, long rates will need to rise even higher — say above 5 per cent — to attract investors, given the looming wave of debt issuance.

The bottom line, then, is that people holding that not-so-boring long-bond ETF could face more drama. But then nobody ever said that exiting quantitative easing would be easy; the real challenge has barely even begun.

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We need a political Alan Turing to design AI safeguards

TECHNOLOGY

John Thornhill

When Alan Turing worked at Bletchley Park during the second world war, he helped solve a diabolical puzzle: cracking Nazi Germany's "unbreakable" Enigma code. Next month, the UK government is hosting an international conference at the same Buckinghamshire country house to explore a similarly mind-bending problem: minimising the potentially catastrophic risks of artificial intelligence. Even a mathematician as ingenious as Turing, though, would be tested by that challenge.

Whereas the electro-mechanical device that Turing built could perform just one code-cracking function well, today's frontier AI models are approaching the "universal" computers he could only imagine, capable of vastly more functions. The dilemma is that the same technology that can boost economic productivity and scientific research can also escalate cyberwarfare and bioterrorism.

As has become clear from the ferocious public debate that has erupted since OpenAI's release of its ChatGPT chatbot last November, the spectrum of concerns aroused by AI is expanding fast. At one end, "safety" champions extrapolate from the recent advances in AI technology and focus on extreme risks. An open letter signed earlier this year by dozens of the world's leading AI researchers — including the chief executives of OpenAI, Anthropic and Google DeepMind, which are developing the most powerful models — even declared: "Mitigating the risk of extinction from AI should be a global priority alongside other societal-scale risks such as pandemics and nuclear war."

At the other end, "ethics" advocates are agitated by the here-and-now concerns of algorithmic bias, discrimination, disinformation, copyright, workers' rights and the concentration of corporate power. Some researchers, such as Emily Bender, a professor at the University of Washington, argue that the debate over the existential risks of AI is science fiction fantasy designed to distract from today's concerns.

Several civil society groups and smaller tech companies, who feel excluded from Bletchley Park's official proceedings, are organising fringe events to discuss the issues they think are being ignored.

> Bletchley Park summit will mean little unless it leads to meaningful co-ordinated action on frontier models

Matt Clifford, the British tech investor who is helping to set the agenda for the AI safety summit, accepts that it will only address one set of concerns. But he argues that other forums and institutions are already grappling with many other issues. "We've chosen a narrow focus, not because we don't care about all the other things, but because it's the bit that feels urgent, important and neglected," he tells me.

In particular, he says the conference will explore the possibilities and dangers of next-generation frontier models, likely to be released within the next 18 months. Even the creators of these models struggle to predict their capabilities. But they are certain they will be significantly more powerful than those of today and, by default, available to many millions of people.

As Dario Amodei, chief executive of Anthropic, outlined in chilling testimony to the US Congress in July, the development of more powerful AI models might revolutionise scientific discovery but it would also "greatly widen the set of people who can wreak havoc". Without appropriate guardrails, there might be a substantial risk of a "large-scale biological attack", he said.

Although the industry is resistant, it is hard to escape the conclusion that the precautionary principle must now apply to frontier AI models given the unknowability of their capabilities and the speed at which they are being developed. That is the view of Yoshua Bengio, a pioneering AI researcher and winner of the Turing award for computer science, who is attending the Bletchley Park conference.

Bengio suggests that frontier AI models could be regulated in the same way that the US Food and Drug Administration controls the release of drugs to stop garbage cures being sold. That may slow the pace of innovation and cost the tech companies more money but, "that's the price of safety and we should not hesitate to do it," he says in an interview for the FT's forthcoming Tech Tonic podcast series.

It is commendable that the British government is starting a global conversation on AI safety and is itself building expert state capacity to grapple with frontier models. But Bletchley Park will mean little unless it leads to meaningful co-ordinated action. And in a world distracted by so many dangers, that will require a political, rather than a technological, Turing to crack the code.

The writer is founder of Sifted, an FT-backed site about European start-ups

Lex.

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Generation Rent: home truths

Life is rough for tenants. For the estimated 11mn people in England who rely on renting from private landlords, yesterday was particularly short of good news.

An average of 25 tenants are chasing each available home, property website Rightmove said. Listed landlords Grainger and Unite Group, which serves students, said that they had pushed up annual rents 8 and 7 per cent, respectively.

Conditions will remain tough for Generation Rent, typically younger Britons priced out of buying their own homes. But the supply crunch creates a long-term opportunity for investors in the nascent "build-to-rent" sector.

The UK's rental sector is still dominated by small private landlords. Properties owned by large outfits such as Grainger account for just 2 per cent of all privately rented stock. Smaller landlords are bailing out. They cannot all push through big enough rent rises to service buy-to-let mortgages. The number of UK properties available to rent is at a 14-year low.

A recent survey suggested private landlords are twice as likely to sell as to buy, even though mortgage costs are coming down. The threat of legislation that would in effect end fixed-term tenancies in England also puts them off. That should widen the niche of commercial build-to-rent developers such as insurer Legal & General and private capital group Blackstone. They can negotiate cheap finance.

Grainger has fixed the cost of its debt at 3.5 per cent for the next five years, it said yesterday. Falling valuations have deterred build-to-rent investors this year. Construction costs have been another worry. Transactions in the first half of the year fell to £1.9bn, down from £2.5bn a year earlier, according to Cushman & Wakefield data.

Strong wage growth should allow landlords to keep raising rents, however. Typically, a Grainger tenant spends 28 per cent of their income on rent — meeting housing charity Shelter's 30 per cent "affordability rule". Hamptons expects rents to rise 25 per cent over the next four years.

Build-to-rent is no panacea for the UK's chronic housing shortage. This is rooted in a dysfunctional planning system. Some campaigners will deplore the fact that home ownership is, for many, unaffordable. But commercial build-to-rent investors could at least supply roofs over the heads of a proportion of Generation Rent.

PayPay/SoftBank: QR the one

Cash is still king in Japan. It remains the preferred payment option even though digital alternatives dominate some other Asian nations. But cashless transactions are surging, thanks to a nudge from the pandemic. SoftBank stands to benefit via payments business PayPay.

Cashless payments rose almost a fifth last year to hit ¥111tn ($745bn), about a third of the total. Payments where users scan a QR code from a mobile app are the most widely adopted form of digital payment.

Businesses vying for a slice of the market include Apple Pay and Google Pay, also Line Pay, Mercari Pay and Rakuten Pay. PayPay has emerged as a winner. It has gained about two-thirds of Japan's QR-code payments market.

It is majority-owned by the telecoms arm of SoftBank and by holding companies and a fund linked to the tech investment group.

PayPay's victory has been expensive. Marketing costs are steep. Fierce competition means splurging on cashbacks and advertising. It also holds back commissions that payments groups can extract from merchants.

SoftBank shares have slipped in the past month as enthusiasm has ebbed for its recently listed chip designer Arm. The focus of investors has switched to the group's other ventures, including its Vision and Latin American funds. Almost three-quarters of its companies lost value in the latest quarter.

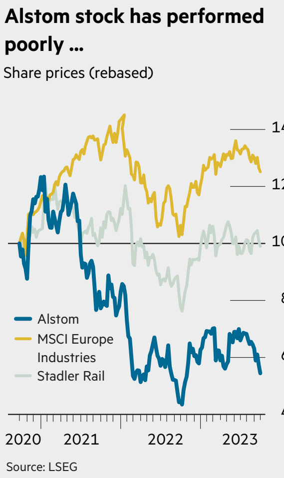
PayPay set itself apart by posting its first-ever profit before interest, taxes, depreciation and amortisation for the June quarter. Japan's mobile payments market is still a nascent industry. It is estimated to grow at an annual rate of 25 per cent to the end of 2027. That leaves room for PayPay to grow.

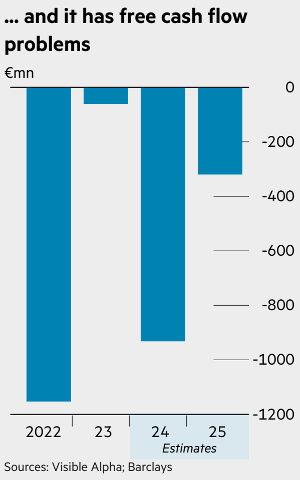
SoftBank's big Japanese mobile arm supports PayPay by encouraging subscribers to use its services.

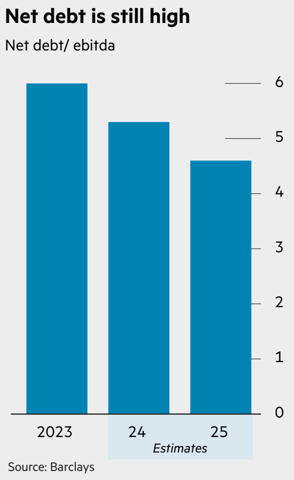
A valuation of $7bn has no greater standing than business gossip for the moment. But an IPO would merit attention from investors.

Alstom: rack and pinion railway

Europe's leading maker of rolling stock has had a torrid time on the stock market lately. Alstom's free cash outflows make some investors nervous about possible equity issuance. Doubters think that net debt will remain high versus ebitda.







Late trains irritate commuters. Investors in Alstom too: the company's Aventra rolling-stock projects in the UK have been delayed.

Poor execution means less cash flow for the indebted French trainmaker. Nervous traders knocked Alstom's share price 35 per cent yesterday morning. The group's shaky finances fuelled talk of a fundraising, which management denials could not completely dispel.

Alstom has a signalling problem. Analysts tuning into an Alstom conference call on Wednesday evening were greeted by chief financial officer Bernard Delpit.

Chief executive Henri Poupart-Lafarge did not attend. Delpit arrived at Alstom only three months ago. He had to explain why consensus forecasts of free cash outflows are ballooning.

The projected figure has widened from €152mn to €1.15bn in the first half, according data service Visible Alpha.

Analysts have been scurrying to increase their net debt estimates too.

Alstom will report interim results in mid-November. Hopes that UK projects providing 443 trains would soon deliver better cash flow and reduce debt have been dashed.

Poupart-Lafarge and Delpit have much to do. Alstom's share price, even before yesterday's collapse, had trailed the MSCI European industrials index by 30 per cent over two years.

Over the past three years, Alstom's operating cash outflows have summed to minus €426mn. Optimists will highlight a timing problem caused by elevated inventories and point to the group's net liquidity position (including credit lines) of €3.5bn.

Sceptics will rightly question any dependence on UK infrastructure projects for future cash flows. Net debt to forward ebitda, on Barclays estimates, looks high at more than 5 times, even if that should fall in the next year or so.

As global bond yields arc ever higher, the bears drive the sentiment train.

If you want credibility, stick to your timetable and front up any apologies when you miss them. That applies to running a train-making company as well as a train service.

UK tobacco: falter tips

Is the business model of big tobacco finally going up in smoke? The industry has been smouldering on by offsetting volume declines with price hikes.

But tougher anti-smoking policies, of the kind announced by UK prime minister Rishi Sunak on Wednesday, highlight the limits of this strategy.

The UK, alongside New Zealand and Australia, leads the pack in smoking clampdowns. The percentage of smokers has fallen from 20 per cent in 2011 to 12.9 per cent in 2022. Sunak's plan to create a smokeless generation, by raising the age at which it becomes legal to smoke in England by one year every year from 2027, will accelerate this process. Four out of five smokers pick up the habit before they turn 20.

A back-of-the-fag-packet calculation suggests the policy would take out a big chunk of customers. There are 6.4mn smokers in the UK. Assume over-60s leave the pool over the next two decades and people currently under 20 do not join. Apply historic quit rates — of about 4 per cent a year — to residual smokers. That would leave 2mn-2.5mn smokers in the country, equivalent to an annual decline of 5-6 per cent.

Sunak's policy applies only to England and may be hampered by delinquency but the figures show the difficulty for cigarette manufacturers, whose efforts to switch into vapes and e-cigarettes are faltering. A pack of cigarettes now costs almost £15, constraining for price hikes.

The good news for big tobacco is that the UK is a smallish market. Even for Imperial Brands, the maker of local cigarettes such as John Player Special, it accounts only for a high single-digit revenue share. Other countries are unlikely to follow its lead at speed.

Moreover, tobacco groups throw off cash. Imperial generated £2.6bn after capex in 2022, equivalent to 17 per cent of its market value. Its new £1.1bn buyback is enough to retire more than 7 per cent of the stock.

As Panmure Gordon notes, at this rate Imperial will run out of shares to buy long before it runs out of smokers.

Corona/Budweiser: crown duel

Constellation Brands has plenty to toast these days. The beer, wine and spirit powerhouse is home to the most popular beer in the US right now. Its Modelo Especial overtook Anheuser-Busch InBev's Bud Light as America's top selling beer in May.

A conservative backlash to a tie-up with transgender TikTok personality Dylan Mulvaney flattened demand for Bud Light, but Modelo's rise has been steady. The popularity of the beer, a Pilsner served in a wide, gold-topped bottle, highlights the growing cultural influence of the Hispanic consumer.

The Mexican beer boom shows no signs of slowing. In the three months to August, Constellation's beer business — including brands such as Corona and Pacifico — reported a 12 per cent year-on-year increase in sales. This lift was driven by a near 9 per cent rise in shipments. Rivals have relied on price increases to propel their top lines.

Demand for Mexican brands is helping Constellation buck a secular dip in US beer consumption. Total beer volumes fell at a compound annual growth rate of 2 per cent from 2017-22, drinks market consultancy IWSR says. This pace should persist through 2027. Mexican beers help explain why Constellation shares — despite just a 6 per cent gain this year — trade at a premium to peers.

At more than 20 times forward earnings that multiple towers over the 12 to 16 times rival brewers merit.

There are factors that could sap the fizz from Constellation's earnings. Its wine and spirit business — about a fifth of group sales and 16 per cent of total operating profits last year — suffers from softer demand.

Sales from the division fell 14 per cent for the August quarter.

An ill-judged investment in Canadian marijuana grower Canopy Growth is another downer. Constellation took an $1.1bn impairment on its stake last year and has written down another $136mn so far this year.

The hangover from this should not dim Constellation's starry premium.

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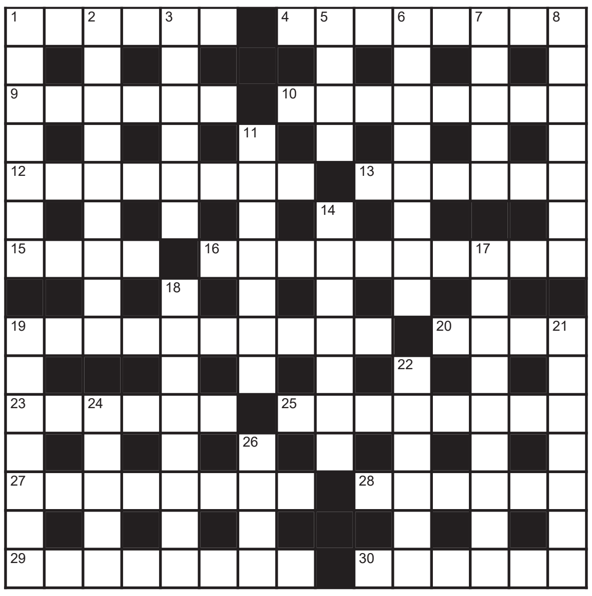
CROSSWORD

No 17,541 Set by MUDD



ACROSS

1 Cost in silver borne by lady (6)
4 Very hot, current clothes right (8)
9 Team, we hear, sounded fatigued (6)
10 Exciting fight with man (8)
12 Joke about line penned by writer, a local employee (8)
13 Fencer's move to secure old room (6)
15 Sunny European holiday destination? (4)
16 A bus time so unreliable, on the wagon! (10)
19 Missile aimed at stooge, dupe has scar, it being splattered (7,3)
20 Refrain from knocking over crockery (4)
23 Live wires ideally locked up? (6)
25 A bird has been rescued by that woman — bravo! (4,4)
27 First test in which spirit shown by opener for India (8)
28 Not just fun playing tune (6)
29 Another fluid containing second source of gas (5,3)
30 Are you sure about friend? (6)

DOWN

1 Miscreant spat into greyish-brown receptacle filled with dirt (7)
2 A bomb disrupting game north of English county (9)
3 Beginning in German, Alice translated language (6)
5 A final farewell to European tender (4)
6 Spinning more, and going under top of pad, how's that? (6,2)
7 Landmark comprising stones arranged in arc (5)
8 Intoxicated members barred? (7)
11 Priest defending sinful dance (7)
14 Footballer, one not working (7)
17 Alert — as 14 down might be? (2,3,4)
18 Part of a round where Open Golf sometimes played (8)
19 Drawings etc in business on animation (7)
21 Describe fish beneath harbour (7)
22 Record featuring new dance genre (6)
24 More merry having taken Friday off, one going downhill fast? (5)
26 Call for sheet of paper (4)

JOTTER PAD

Solution 17,540

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Watches & Jewellery Asia

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Only Watch solidifies its place in the industry
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Multicultural benefit
Austy Lee's designs draw a bigger crowd
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Hong Kong pushes for top slot in vintage watch sales

Auctions challenge the pre-eminence of Geneva, writes *Simon de Burton*

Geneva has long been the global centre of high-end watch auctions, home to twice-yearly flagship sales staged by Christie's, Phillips, Sotheby's and Antiquorum that regularly attract some of the most valuable vintage timepieces in existence.

But an increasing number of buyers, sellers and auction house experts believe Hong Kong is set to take over as the biggest player on the scene. And their prediction has been backed up by an announcement last week that a significant part of one of the world's finest publicly known collections will be sold there next month.

French businessman Patrick Getreide has chosen Christie's Hong Kong to disperse his celebrated OAK Collection, starting with a 142-lot sale taking place at the Convention and Exhibition Centre on November 26.

The collection, which comprises more than 500 items in total, was first revealed to the wider world in May last year in the first exhibition of its type, prior to which it had been kept so private that even the owner's sister was unaware of it.

Held at the London Design Museum, the event showcased 160 of Getreide's most prized watches, many of which were unique pieces, hence OAK: 'one of a kind'.

But Getreide says it was not his intention at the time to part with the collection, which took him more than 30 years to amass and which pundits and experts have variously estimated to be worth anything from $100mn to more than $300mn.

"I believe there is always a time to do certain things, and now feels like the time to sell my watches," says Getreide. "My children are not at all interested in taking them on, and I would rather part with them now as I approach 70 and while I am still in good shape. I can't say it isn't a very sad thing to have to do, but it is definitely the right thing to do."

> 'Hong Kong is a good place to sell, not least because a few more billionaires are created there every month'

The collection is expected to be dispersed in as many as five separate sales running through to the end of next year, but Getreide cites Christie's current dominance of the Asian watch auction market as the reason to sell the first tranche there — helped by the decades-long relationship that he has established with Alexandre Bigler, the auction house's senior vice-president and head of watches.

"I think Hong Kong is a very good place to sell, not least because a few more billionaires are created there every month — that's something we don't see in Europe."

The first half of this year has seen Christie's account for 50 per cent of the Asian watch auction market by value, racking up HK$443.8mn (US$56.6mn) in sales to leave main rival Phillips in second place (30 per cent share, $33.8mn) and Sotheby's in third (20 per cent share, $21.9mn).

The house has also proved to be something of a specialist in dispersing single-owner collections in Asia, notably through the sale of the 107-lot Ultimate Collection of "world-class modern and

Continued on page 2

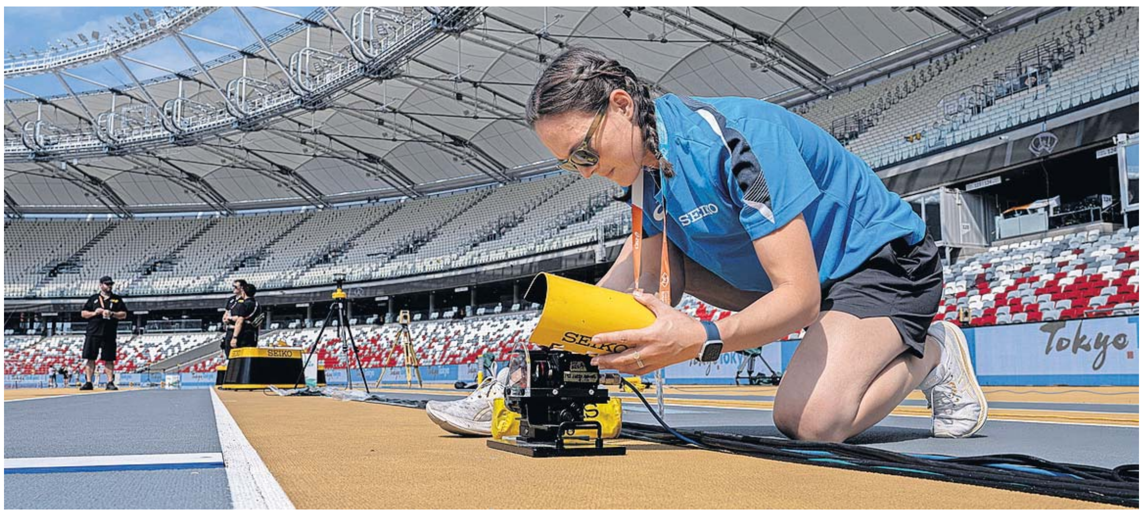
Michael Steele/Getty Images

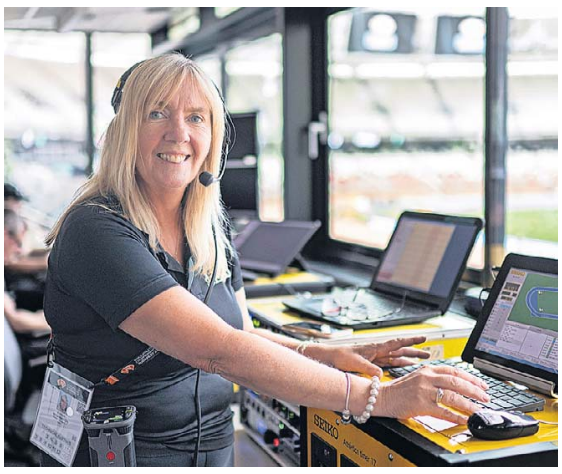
Timekeepers help keep athletes on track

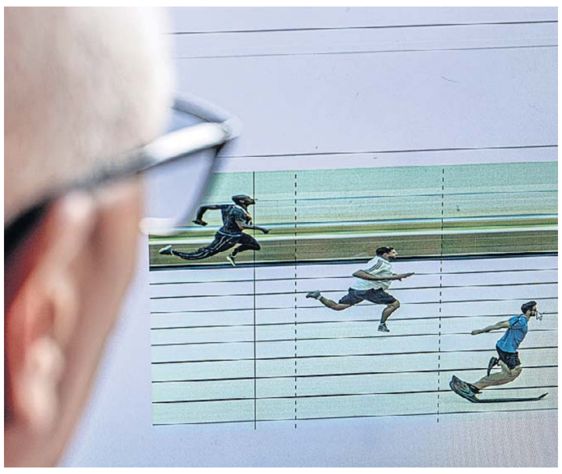
What does it mean for a watch brand to be the official timing sponsor of a sporting event? Since the Tokyo Olympics in 1964, Seiko has provided timing and measurement services for sports from swimming to speed skating. We a look behind the scenes at the World Athletics Championships in Budapest, where athletes' official times are calculated using equipment capable of capturing up to 10,000 frames per second.
Page 2

Seiko's timekeepers help keep athletes on track

Kate Youde discovers what it means to be a sports event's official timing partner







Run for their money: Karen Washington (bottom left) and the Seiko team provided timing services for this year's World Athletics Championships
Andras D. Hajdu

As sprinters powered down the straight in the men's 100 metres final at the World Athletics Championships in Budapest in August, Karen Washington armed the infrared laser beam at the finish line that would give the unofficial time. Official times are calculated from an athlete's torso using cameras capable of capturing up to 10,000 frames per second.

She had the same job when Usain Bolt ran his world record time of 9.58 seconds in Berlin in 2009. "I do feel like I never wanted him to break it [again] because it was my record as much as his," she says.

We are speaking while overlooking the track at the National Athletics Centre, beside the Danube river, two days before the competition in Hungary gets under way. Washington is one of 65 people working for Seiko to help fulfil its role as official timekeeper to the championships.

With the event covered by 46 broadcasters, and media and photographers from 75 countries, this side of its business boosts global brand awareness for the Japanese watchmaker.

Since the Tokyo Olympics in 1964, Seiko has provided timing and measurement services for sports ranging from swimming to speed skating. It has held a contract with World Athletics since 1985, timing its first World Athletics Championships in Rome in 1987.

The seven-person Seiko Timing Services team in the UK, which collaborates with external specialists, oversees this partnership from a warehouse in Crewe, north-west England, where it has workshops for testing equipment.

"We're always striving to make things more accurate, more reliable, and that's where a lot of camera technology comes in because it allows things to be reviewed; you don't have to make a split decision in the moment," says Laurie Needham, research and development manager at Seiko Timing Services, who has a PhD in biomechanics. "But also it's about getting the information back faster to make the competition run more smoothly — so it's ultimately more entertaining for people to watch."

In Budapest, the team is launching its newest innovation: the triple jump phase measurement. Developed over the course of nearly three years, this system uses a camera — capable of recording 60 frames per second — placed high above the runway. Artificial intelligence uses the images to track an athlete's movements through their hop, skip and jump, producing data for the distance, height and speed of each of these phases.

The data is to help broadcasters "tell the story" of the event but could be used by athletes to improve their performance, says Needham.

"It's a bit of a change for us, in terms of moving from not just doing precision timing and measurement [but] also providing entertainment data that broadcast and TV can use to help people understand how somebody has done better than someone else," he explains. "It might be that one athlete hits their top speed five metres before take-off but another athlete hits top speed one metre before and maybe that's what's helping them to go further."

The new system runs alongside video distance measurement (VDM), for which two high-resolution cameras capture an athlete's landing in the sandpit. A separate jump management system, similar to the now-ubiquitous video assistant referee tool in football, uses a camera capturing 300 frames per second to show the point where an athlete takes off from the board. A judge sitting between the Seiko employees operating these systems uses the information to determine the validity of a jump.

Most people working for Seiko Timing Services at the championships have full-time jobs in other professions. Washington, an accountant who runs a road haulage company with her husband Ian, first joined the timing team for the Barcelona Olympics in 1992. She had been working as a buyer at Seiko's UK headquarters when the company sought additional graphics operators. It was a fortuitous decision: she met Ian, who was operating the false start equipment at the time.

Leading the team in Budapest is Daniel Jones, event manager for Seiko Timing Services. When we meet, he has already been on site for more than 10 days overseeing the set-up of the 2,000 items of equipment (not including individual cables) that arrived in six 13-tonne trucks from the UK and one container from Japan.

His team operates everything from the trackside clocks and field event boards to the local precision system providing data on track athletes' individual performances for television purposes. Seiko Timing Services is in the latter stages of developing video tracking that will eliminate the need for athletes to wear tags, which use ultra-wideband technology, behind their bibs. It is also looking at replacing the laser-based electronic distance measurement used for long throws (javelin, hammer and discus) with a camera-based VDM system similar to that already used for shot putt.

For the false start system, track athletes' blocks are calibrated to detect whether anyone reacts before the gun is fired or the reaction time of 0.1 seconds. A waveform shows illegal motion. Video footage from both behind and in front of the athletes supports the judge in making their decision on whether to disqualify someone.

"In all those processes we are just giving information to the right judges and it's down to them to make the right decision," says Jones.

Seiko reflects its expertise in precision timing in its Prospex Speedtimer watch series. Demand for its 2023 World Athletics limited-edition solar chronograph, with a 1/100th of a second counter and dial mimicking the texture of the running track, was five times greater than predicted in the brand's Budapest store, according to Attila Lichtenberger, general director, Seiko Boutique Budapest and Seiko Hungary.

In the UK, traffic to the Seiko Boutique website increased by 15 per cent during the eight-day championships, compared with the previous eight days, and the limited-edition model was the top-selling Prospex design in the week leading up to the event.

With the demands on Seiko Timing Services shifting more towards the "entertainment factor", Jones hopes there will be collaboration between the "funner side" of his department's work and Seiko watchmaking. However, he knows that the two are already linked. "We're here to promote the watches at the end of the day and the brand of Seiko," he says.

Hong Kong vies for top slot in vintage watch sales

Continued from page 1

golden age" watches that alone realised HK$127mn in May.

Bigler is confident the OAK Collection will achieve even greater numbers, not least because of the exceptional condition of the pieces on offer. "Asian buyers want impeccable watches in original condition and, preferably, with boxes and papers, even in the case of vintage models — and that is exactly what Getreide has always gone for.

"This is the first time we have had a collection of such quality and scale, essentially because no one else has ever had the time, the means, or the guts to go out and put something like this together. The fact that last year's OAK Collection exhibition was so widely promoted is also going to have a very positive effect — provenance has become more important to the new breed of buyers from Asia and the Middle East.

"They have been very smart in the way they have learnt about the subject, and that is partly what is behind the really big prices being made in Hong Kong."

Next month's sale will test the appetite for the OAK Collection with a wide cross-section of watches. Offerings range from true vintage pieces — such as an Audemars Piguet Reference 5516 from the 1950s, estimated at up to HK$13mn, and a 1950 Patek Philippe (HK$4mn-HK$8mn) — to rarities from contemporary, independent makers such as Akrivia and Kari Voutilainen.

But collectors who fail to secure a piece from the OAK Collection will have plenty more opportunities to bid at Hong Kong-based sales between now and the end of November, with five further live auctions scheduled and another taking place online.

Patrick Getreide's OAK Collection

One of the former will be held by Bonhams on November 27. Sharon Chan, the firm's director of watches, Asia, expects bidding to be brisk as collectors get back into the swing of "live" sales after the unusually long Covid lockdowns imposed in some parts of the region.

"I have just returned from trips to Japan and Singapore, places that I haven't been able to go to for a while due to the Covid situation," says Chan, who has been in the auction business for 18 years, five with Bonhams.

"As with retail sales, Covid attracted a lot of people to the world of online watch auctions and gave them time to really study the subject — and one of the results seems to have been a shift in taste among Asian buyers, in particular.

"People still appreciate the typical sporty, steel watches that were previously making very high, often inflated prices, but they are now starting to pay attention to what we are calling 'neo-vintage'," she says.

"By that, I mean watches made from around the 1980s until the very early 2000s, which are somewhere between sporty and classic and fit in with the return to smaller sizes that the brands have recently been addressing with new watches."

Chan says models such as the reissued Cartier Crash, the 35mm diameter Patek Philippe Reference 5050 perpetual calendar watch, and pieces from "rediscovered" makers such as Daniel Roth and Roger Dubuis are proving especially popular.

"A lot of Asian collectors are becoming very passionate about the new vintage style, and it is bringing them to dial names that they often didn't know about before," says Chan, who has also noticed another post-Covid phenomenon: buyers are getting younger.

"A decade ago, the majority of buyers in our Hong Kong sales were in the 40 to 60 age bracket. Now, I would say that has broadened out to cover people from their late 20s to around 50.

"Many of our collectors are still at university and belong to groups of watch geeks who started collecting at a very young age — even though they might have had a limited budget.

"They became very used to buying in online auctions during the lockdowns, and that method of selling has become so popular that there now tend to be far fewer people in the room at a live sale, and the atmosphere is far less vibrant — but the number of bidders is far larger, as so many take part via the internet."

Clicking a mouse rather than raising a paddle seems to be no barrier to their willingness to spend, either — as evinced last summer when a rare Cartier Mystery clock tipped to fetch HK$2mn was knocked down for a triple-estimate HK$6.8mn.

It went, of course, to a "mystery buyer" — bidding virtually.

Race royalty meets Japanese streetwear

Watch brand Tag Heuer has brought 81-year-old Japanese racing driver Tetsu Ikuzawa back into the limelight — 45 years after he retired from full-time competition. Ikuzawa's return to international fame is the result of his fashion-influencer daughter, Mai, encouraging Tag Heuer and watch customiser Bamford Watch Department to create a Team Ikuzawa tribute piece *(below)*. The $6,200 Carrera chronograph gets a white dial with red highlights, inspired by the livery of some of Ikuzawa's racing cars. He was among the most successful of Japan's drivers during the country's early years in motorsport, competing in Formula Three, Formula Two and endurance races. In 1973, Ikuzawa also became one of the first Japanese drivers to enter the 24 Hours of Le Mans.

Grand designs

Patek Philippe has declared June's Watch Art Grand Exhibition, held in Tokyo, to be one of the best such events it has ever staged after it clocked up more than 60,000 visitors. The show, held in the landmark Shunjuku Sumitomo skyscraper, featured 500 objects arranged in 10 especially constructed rooms, one of which replicated Patek's historic Geneva salon. Among the exhibits were 190 pieces from the maker's museum — including watches originally owned by Queen Victoria, Pope Pius IX, and jazz legend Duke Ellington — 40 Japanese-themed 'rare handcraft' pieces, and two new, Japan-only watches. It was the sixth Grand Exhibition following the 2012 launch of the concept in Dubai, since when shows have also been held in Munich, London, New York and Singapore.

Up and down

Figures released by the Federation of the Swiss Watch Industry in late August show the value of Swiss watch exports to China has dropped by more than 27 per cent since the same period last year. The latest tally of SFr190.2mn ($207.75mn) compares with SFr261.8mn last year and SFr226.8mn in 2021. China remains the world's second biggest importer of Swiss watches after the United States, to which timepieces with a combined value of more than SFr297.8mn were sent during the 12 months to August. In contrast to the retraction in the mainland, the value of Swiss watches exported to Hong Kong was up 29 per cent. Elsewhere in Asia, they also rose: up 8.7 per cent to Japan, and up 3.5 per cent to Singapore. This means Asian countries represent four of the world's top six watch markets. The fourth spot is held by the UK.

Paper tiger

Japanese brand Citizen has produced what is believed to be the first wristwatch with a dial made from washi paper — the translucent material more commonly used to cover shoji sliding screens in order to soften sunlight in rooms. The nature of washi makes it ideal for Citizen's Eco-Drive watches, which operate through light absorption. The $3,800 special edition *(above)* features a black dial highlighted with flakes of gold leaf applied through a bamboo tube, a decorative art known as sunago-maki.

Future proof

Singapore-based watch advisory and trading business FutureGrail held its first online auction last month, tempting bidders with a low buyer's premium of just 5 per cent of a lot's hammer price — compared with the 25 per cent-plus charged by the bigger and more established houses. FutureGrail also offers a 200-exhibit museum that can be viewed by appointment. Founded by watch collector Ali Nael and business partner Mohsin Rizvi, it opened six months ago in the B&D building on the city-state's Pasir Panjang Road.

Eyes on the prize

Japanese watchmaker Yosuke Sekiguchi has beaten hundreds of hopefuls to reach the semi-final of the inaugural Louis Vuitton Watch Prize for Independent Creatives, launched last year. He is one of 20 whose work is now being assessed by experts before five finalists are announced in December. The winner, who will be revealed at a ceremony in Paris in February, will receive €150,000 and mentorship at Louis Vuitton's design and manufacturing facility, La Fabrique du Temps. Sekiguchi, 42, left Japan in 2004 to pursue a horological career in Switzerland, where he worked for La Joux-Perret and Christophe Claret before making his first watch under his own name in 2015.

Mercury rises

A plastic Pulsemaster digital watch made by Seiko of Japan in 1982 that was expected to fetch just £500 soared to £35,560 when it crossed the block at a Sotheby's auction of memorabilia from the collection of the late Freddie Mercury last month. The 1,406-lot sale, which was spread across six auctions, included paintings, furniture, ephemera and musical instruments amassed by the Queen frontman. It grossed more than $50mn.

Time is ticking

A horological offshoot launched on the giant Chinese social media platform TikTok less than a year ago has already become the watch world's most popular online community. At time of writing #WatchTok had amassed 1.1bn views, with contributors posting short videos about everything from buying watches through Japanese auction sites to an analysis of the multimillion-dollar timepiece collection belonging to the King of Eswatini (formerly Swaziland). Prolific creator Mike Nouveau has even filmed himself flipping a watch for a four-figure profit — just two hours after buying it.

Bling and you'll miss it

Jacob & Co, famed for its ostentatious watches beloved of rap artists, sports stars and other celebrities, has designed a credit card in conjunction with global hospitality provider Billionaire and payment card company Insignia. Likely to prove popular with flamboyant high rollers, the metal Visa Infinite card comes in a variety of styles, including gold, silver and diamond-set versions. Just 150 will be available.

Simon de Burton

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Deconstructed Watch

See a pictorial deconstruction of the Patek Philippe *SkyMoon Tourbilon* alongside other watches online

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The Italian car designer has tapped into the expertise of Hong Kong-based Globics for the first in a series of sophisticated models, says *Simon de Burton*

Pininfarina accelerates to a hybrid smartwatch

Clockwise from left: Loewe Lee, managing director of Globics; the Pininfarina Battista Edizione Nino Farina car; the Senso Pininfarina hybrid watch

Anyone with more than a passing interest in motoring will have heard of Pininfarina, the Italian car design firm established during the 1930s by Battista Farina, which went on to create some of the most celebrated models in the history of the automobile.

Nicknamed "Pinin" because he was the youngest of 10 children, Farina became famous for his work with prestige marques, including Alfa Romeo, Cisitalia and Ferrari, as well as more mundane makers, such as Austin, Peugeot and Fiat.

These days, the business has several divisions. Automobili Pininfarina currently manufactures the all-electric 1,900hp Battista hypercar. Pininfarina itself continues to engineer concept vehicles from start to finish. And Pininfarina Extra — established by the founder's grandson, Paolo — serves as an industrial design division that envisions objects ranging from trains to yachts and from pens to residential buildings.

The Pininfarina name has also been on the fringes of the horological world since 2008, when it began working with Bovet — an independent Swiss watch house — to create an ongoing series of high-end timepieces, aimed at the type of wealthy individuals who got to know the business by owning supercars with Pininfarina coachwork.

One such person is Loewe Lee, whose Hong Kong-based family company, National Electronics Holdings, was founded during the early 1950s by his grandfather as a manufacturer of long case — or grandfather — clocks.

By the early 1970s, it had grown into a manufacturer supplying what was then cutting-edge LED technology to some of the world's largest producers of quartz watches — including Casio and Timex — as well as the once-giant Japanese firm Namco, creator of the best-selling *Pac-Man* video game and its spin-off watch.

The business went on to specialise as a developer of electronic watches and movements. When Lee joined in 2005, it was already exploring the potential of incorporating Bluetooth connectivity into timepieces — a full decade before the release of the market-dominating Apple Watch. Indeed, NEH was making and selling basic smartwatches as far back as 2010 — although, back then, its products did not benefit from Apple's ecosystem or marketing methods.

However, as a collector, Lee finds little pleasure in the plastic smartwatch. "I wear a [fitness tracker] on one wrist and my analogue watches on the other, but I have long wanted to create something that bridges the classic, analogue timepiece with state-of-the-art technology," he explains.

The type of timepiece he refers to is known as a "hybrid smartwatch" and examples have been available for several years, from brands such as Frederique Constant, Kronaby, Withings, Skagen and Fossil.

But it was Lee's life-long love of Ferrari cars — and the marque's associations with Pininfarina — that got him thinking about the Italian design house as a partner to work with on a watch containing the advanced smartwatch technology in which NEH specialises.

"Our aim was to create something that is, first and foremost, a traditional-looking, beautifully designed and well-made watch, but which also has useful tech functions in the background," he says. "I knew about Pininfarina through my interest in cars, so we struck up a dialogue and, between us, decided that we could do something together."

The result is called the Senso Pininfarina hybrid smartwatch by Globics, one of the companies in the NEH group. It is expected to be the first of a series of ever more sophisticated watches produced with Pininfarina.

"Nowadays, all phones look the same and all smartwatches look the same, so we both thought it would be interesting to do something different," says Lee.

"Bovet's association with Pininfarina is at the other end of the spectrum to what we are doing, which is offering an accessible way into the luxury sector through a mid-market hybrid watch. We're hoping it might move the trend away from conventional smartwatches."

With its high-grade stainless steel case, traditional winding crown and classic dial layout, the $399 Senso could easily be mistaken for a regular, entry-level luxury watch.

But beneath the surface lies a smartwatch module with sensors capable of monitoring the wearer's vital signs, blood oxygen level, and sleep quality. Other functions include a stress monitor, activity and hydration reminders, and activity trackers for a variety of sports that, among other things, show distance covered and calories burnt.

Conventional smartphone functions, such as alarms and calling and messaging alerts, are also included, and the Senso's features can be synchronised to the wearer's smartphone through a companion app.

Impressively, the watch can be used for more than a week between battery charges. "We didn't want to overload the watch with functions, but to ensure that all of its capabilities were both relevant and reliable," says Lee. "And, because we want the Senso to be first and foremost a watch, the timekeeping function will always be the last to stop when the battery runs low."

However, hybrid watches have yet to find their place in the market. "The problem with hybrid watches is that they are neither one thing nor the other," argues Jeremy White, the UK executive editor of tech magazine Wired. "Bringing a wearable tech element to a 'proper' watch seems to be a misread of what the consumer wants.

"Watches are not like mobile phones. We don't expect to have one that does everything, and just as 'luxury' phones have never taken off, trying to mesh the world of artisanal watchmaking with tech doesn't really work.

"A good example of that was the $17,000 gold-cased Apple Watch of 2015. It was quietly but quickly discontinued."

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Watches & Jewellery

Only Watch solidifies position in auction calendar

Charity event is now a highly rated sale of unique timepieces, writes *Andrew Hildreth*

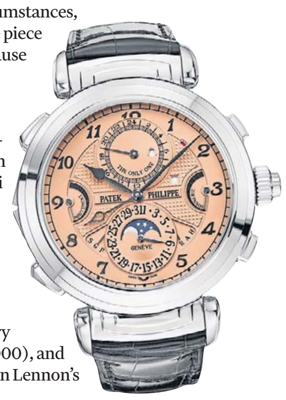
Clockwise from main: Only Watch event now in its tenth edition; the 2017 FP Journe Chronographe Monopoussoir Rattrapante Bleu; Rexhep Rexhepi Chronomètre Antimagnétique 2023; the Patek Philippe 6300A Grandmaster Chime; Krayon Anywhere 2023

On learning that his son had been diagnosed with Duchenne muscular dystrophy, in 2000, Luc Pettavino's reaction was to see what could be done to find a cure for this rare and fatal childhood disorder — a condition that prevents children, mostly boys, from producing a protein to prevent muscles from wasting away. As organiser of the Monaco Yacht Show, Pettavino approached Blancpain, the timing sponsor, to see if a one-off watch could be produced and sold, where all proceeds would go to research on the disease. Encouraged by the brand's positive response, he went to other watch firms in 2004 and the idea took hold. The first Only Watch auction was held in 2005 and, since then, the biennial event, now in its tenth edition, has raised more than SFr100mn ($110mn) towards research, with clinical trials already under way for a possible cure.

Perhaps what was not envisaged at the start of Only Watch was how the industry would benefit from these auctions. What started off with contributions from a few brands, with small changes to the design of existing models, has now become a highly rated sale of unique timepieces: one-offs made specifically for the auction by famous names and independent artisan watchmakers. The auction, itself, has grown into a global platform, which has had a ripple effect on the sales and value of participating brands' other designs.

"Brand offerings have naturally diversified as Only Watch became, step by step, a creative platform and a one-of-a kind rendezvous for the horologist world," Pettavino says. The auction also presented an opportunity for watchmakers to test concepts that will later appear in their collections. Arguably, the bellwether brand was Patek Philippe, which, by significantly altering some of its grand complication watches over successive auctions, propelled the status of Only Watch as a venue to buy otherwise unobtainable timepieces. The record for the world's most expensive watch at auction is still held by the Patek Philippe 6300A, which was sold at Only Watch in 2019 for the stratospheric sum of SFr31mn.

There are two factors in the watch market that have led to the prominence of Only Watch: first, the rise in demand for unique or very rare timepieces; second, collectors requiring assured provenance. Uniqueness in the watch market is something special. For most collectors, having the first or the "only" of something is very important. Often, such a singularity results from historical circumstances, where only one piece survives, or because of important provenance. Examples that have fetched eye-watering prices at auction include the Rolex Bao Dai 6062 triple calendar (SFr5,066,000); Paul Newman's own Rolex Daytona 6239 with an exotic dial ($17,752,500); the JB Champion Patek Philippe 2458 observatory chronometer (SFr3,779,000), and now, the potential for John Lennon's long-lost Patek Philippe 2499 coming to market after being the subject of international legal wranglings for the past decade.



'We are really proud to have given a voice to the new generation through collaborations and the reinterpretation of certain complications'

Outside the small set of known and well-documented pieces, the vintage market has been rocked by suspicions over whether extremely rare watches found at auction or elsewhere are indeed genuine. Earlier this year, a 1957 Omega Speedmaster bought at auction in 2021 was exposed as a 'frankenwatch' — a timepiece that has been built with parts from different models — with both Omega and auctioneers Phillips stating they were "the joint victims of organised criminal activity" in this incident. A police investigation is now under way.

Artisan watches are desired for their intrinsic qualities, but their rising value is in part a reaction to the vagaries in the vintage market, and equally to the demand by collectors for very rare or unique pieces. What was once a sector of the industry held together by a handful of lone watchmakers back in the late 20th century, has now seen remarkable growth in recent years and become a collector's paradise.

By their very nature, artisan watchmakers produce a limited number of pieces per year. Often, their order books are closed, and the waiting lists make our time on earth seem brief. Because of this, when one of these watches comes up on the secondary market, collectors are prepared to cut the queue and bid up ever escalating prices.

For the craftsmen, participating in Only Watch is not just a way of contributing to the war chest against the Duchenne disease, but also a way of making their name known to the wider watch community.

The rise in the artisan sector has allied with the ethos of Only Watch in the production of purpose-made, unique timepieces that are available now, and the prices have been driven up accordingly. FP Journe was the first independent to see a watch sell for over SFr1mn at the charity auction. Other watchmakers have since achieved six-figure prices at this auction, which represented several multiples of the estimate.

At the 2017 Only Watch auction, independent watchmakers started to donate original and previously unseen work. Urwerk combined forces with Laurent Ferrier to produce a unique sculptural piece that housed a satellite display to tell the time.

In subsequent editions, FP Journe has introduced the prototypes for a number of new complicated watches, with unique case and dial combinations. Independent Russian watchmaker Konstantin Chaykin and Finnish master Kari Voutilainen have both also produced unique examples of their regular timepieces.

And the contributions to Only Watch by small independent artisans have kept growing.

In 2019, Gronefeld, De Bethune with Urwerk, and Rexhep Rexhepi all took part. By 2021, many others had followed suit, such as Andersen Genève, Atelier de Chronometrie Barcelona, Krayon, Romain Gauthier, Trilobe, and Daniel Buren. This year, Theo Auffret and Petermann Bédat, and Frederique Constant and Christiaan van der Klaauw have joined in.

The auctions have also influenced the global watch market, where visionary specialist dealers representing artisan watchmakers — such as Dubai-based Perpétuel, The Hour Glass in Singapore, and The Swiss Gallery London — are leading the way in providing limited or extremely rare watches to collectors across the globe.

Jean Arnault, a known collector, and head of Louis Vuitton's La Fabrique du Temps, has also instigated the Louis Vuitton Watch Prize for Independent Creatives to showcase the sector.

Looking back over the past 10 editions, Pettavino sums up the influence of the auctions on the artisan watchmakers: "We are really proud to have given a voice to the new generation through collaborations and the reinterpretation of certain complications," he says. "In my eyes, they are great artists, creative geniuses, and I would like to thank them once again for their remarkable commitment to Only Watch."

The Only Watch 2023 auction takes place on November 5 in Geneva

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The celebrated independent watchmaker has been working with the luxury brand to bring a €500,000 limited edition chiming chronograph to market, reports *Nicholas Foulkes*

Rexhep Rexhepi inaugurates LV's collaboration programme

Rexhep Rexhepi (centre) will shoulder all the production costs while Jean Arnault (left) will use LV's network to sell the new tourbillon chronographe sonnerie

For a young man who has been behind some of the most in-demand watches of recent times, Rexhep Rexhepi is keen to point out that collaborating with big brands is not necessarily his thing. On Monday in California, however, he will be revealed as the first to join Louis Vuitton's five-year programme of collaborations with independent watchmakers.

This programme — the proceeds of which will support the LV watch prize — is set to begin in explosive fashion with a tourbillon chronographe sonnerie watch conceived, designed and, except for a few components, manufactured by Rexhepi.

Housed in a heavily reworked Tambour case — LV's signature watch design — it features two dials: the front, transparent with *plique a jour* enamel; the back showing elapsed seconds and minutes on two tracks indicated by a central pair of hands. At the beginning of every minute counted by the chronograph, the sonnerie mechanism is activated and the watch chimes. With a price tag of around €500,000, only 10 of these watches will be sold.

It is 25 years since Rexhepi arrived in Geneva as a refugee fleeing war in Kosovo. Now, aged 36, his work holds its own with watchmakers twice his age, his name often mentioned in the same breath as Dufour, Journe and Voutilainen. He has won two prizes at the Grand Prix d'Horlogerie de Genève (GPHG), the Oscars of the watch world.

His workshop in Geneva's old town is a place of pilgrimage. He is championed by such international industry heavyweights as Michael Tay, managing director of multi-brand watch retailer The Hour Glass in Singapore, as well as the leading family-run UAE retailer, Seddiqi Holding.

Rexhepi makes watches under two brand names: Akrivia, experimental in concept, contemporary in appearance; and Rexhep, the restrained classic codes of which are epitomised by the multi-award-winning Chronometre Contemporain.

The person who enticed Rexhepi into this project is none other than Jean Arnault, the fifth and youngest child of Bernard Arnault, founder and chief executive of LVMH. Since joining the family business in 2021, Arnault has done much to elevate the LV's horological offer. He not only launched a redesigned Tambour but also announced that LV's watch workshop, La Fabrique du Temps, would be reviving the Gerald Genta and Daniel Roth watch brands.

Arnault established a €150,000 prize for independent watchmaking, as well, which will benefit from sales of the Rexhepi watch launched in Montecito, California — an exclusive community known for its mountain trails and equestrian centres outside Santa Barbara.

With this innovative and complicated watch, Louis Vuitton has brought out one of the strongest contenders so far for the title of most desirable timepiece of 2023.

This is not the first time that programmes to support independent and relatively unknown watchmakers have been launched. Maximilian Büsser, founder of boutique Swiss brand MB&F, did something similar in 2001 when he set up the Opus project at Harry Winston Rare Timepieces (now known as Harry Winston). But Arnault is quick to point out differences. "Here, we're sticking to only five collaborations and every single one has been given the same brief: what is the favourite design that you see within LV watches? How can you put your own touch to it?

"It's not something that we are counting on making millions or even thousands out of — it's really about trying to make a mark in watchmaking history, so people remember that this was a move to champion independent watchmaking as a whole, and not necessarily looking at return on investment or any sort of profit."

While Arnault may not be looking for profit, the costs associated with this type of limited edition project can be considerable for an independent watchmaker. This year, Rexhepi is also launching another new chronograph and an anti-magnetic version of his Chronometre Contemporain. The LV collaboration diverts resources, both human and financial, from the main collection, plus it comes with its own expenses: a new movement can cost between SFr1.5mn-SFr2mn ($1.63mn-$2.18mn) to develop. Then there is the cost of manufacturing, but Rexhepi clearly considers the investment to be worthwhile. "We have to put the processes in place for doing this case, we have to put the processes in place for the polishing, the decoration, so it's a really, really big investment," he says.

'LV will help make people understand that we are not just watchmakers doing the decoration and assembling — we are really inventors'

Louis Vuitton will, in turn, handle the sale of the finished watches via its retail network. Collectors will be invited to purchase a watch, in consultation with Rexhepi.

"I'm not a big fan of collaborations like that," Rexhepi admits quite freely. "But I had this idea for a chiming chronograph and thought maybe they [LV] will help us make people understand that we are not just watchmakers doing the decoration and assembling, we are really inventors. I just wanted to be the first [of the five independent watchmakers with whom LV is collaborating] and Jean was OK with that."

As to the inevitable gossip that he might be acquired by LV, Rexhepi says that "people will always talk". For him, it is less about business than it is mutual respect. "It is more about friendship," he says. "Jean loves watches, he loves watchmaking, and I find it interesting to see a big brand working with a small watchmaker."

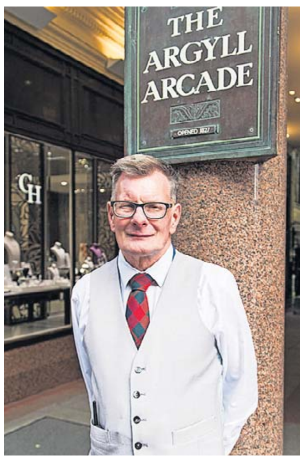
According to Michael Tay, that personal relationship is crucial to understanding the true nature of the collaboration. "Fundamentally, Jean's a product guy. This is something that would have motivated Rexhep. It is not just a brand that Rexhep is collaborating with, it is another passionate individual. If Jean was not there, I'm not sure Rexhep would have pulled the trigger on this project."

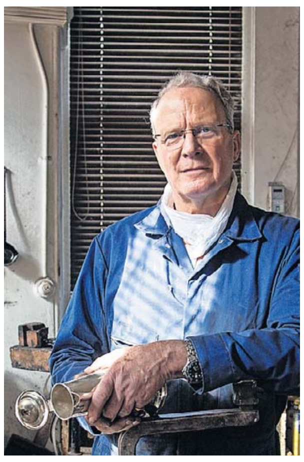
Cartier

Watches & Jewellery

‘If you make it here, you can make it anywhere’

The traders of Argyll Arcade, the UK’s only thoroughfare dedicated solely to watches and jewellery, help Glasgow keep its position as the top centre for retail spending outside London, writes *Alan Knox*





Clockwise from top left: Glasgow’s Argyll Arcade, founded in 1827; Arcade security guard Norman Crabb greets visitors on Buchanan Street; silversmith Colin Morisson-Ignatieff in his workshop; Rox founders Kyron Keogh and Grant Mitchell in the Thrill Room of their arcade flagship; Gucci opened the first store in the UK dedicated solely to the brand’s watch and jewellery collection in 2021; Simon Porter, director of James Porter and Son; Laings’s new watch repair workshop in Buchanan Street’s Rowan House
Alan Knox

When silversmith Colin Morrison-Ignatieff stood with six other craftsmen to present the new Elizabeth Sword to King Charles III in July, it brought full-circle a story which began over two centuries before in his Glasgow workshop.

Morrison-Ignatieff — who gilded the sword’s thistle-design hilt and grip, as well as its pommel cap and scabbard mounts — has a 200-year-old wooden box in his workshop, three floors above Glasgow’s Argyll Arcade. Inside it are the tools last used in 1818 to repair the Crown of Scotland, after it had lain walled off in Edinburgh Castle for more than 100 years.

Now, the Elizabeth sword, named after the late queen, has become the first new item to be added to the Honours of Scotland — the country’s Crown Jewels — in five centuries.

“That is the history of this country,” says Ignatieff of the stories chiselled in the swords, trophies and trinkets he repairs. “You’ve had those skills passed down to you. When we get Victorian and Georgian pieces in, we know exactly how they were put together.”

For close to 150 years, this desire to build upon past traditions has drawn jewellers and watch sellers to the grade-A listed Argyll Arcade, the UK’s only remaining arcade dedicated solely to watches and jewellery. Constructed in 1827 in an L-shape, connecting the city centre thoroughfares of Buchanan Street and Argyle Street, its hammerbeam roof is more reminiscent of a baronial castle than a shopping mall.

“It’s about generation and families,” says Norman Crabb, who patrols the arcade and greets the newly betrothed, for whom a visit there is a rite of passage on their journey down the aisle. “You rarely see an empty unit here; a shop might be empty for a week and then it’s filled.” Crabb knows what he is talking about: his father and two uncles all maintained shop units there.

The arcade was inspired by the glass-covered Parisian arcades of the same era; the association with watches and jewellery dates from 1887, when James Porter, a clockmaker’s apprentice, chose to open a store there to service the watch trade. Today, James Porter & Son continues to trade there and ranks as Scotland’s fifth oldest business, having been passed down from father to son for five generations.

Yet for Simon Porter — great-great-grandson of James Porter and company director since taking over from his father in 2007 — the constant competition posed by the dense concentration of more than 30 jewellers and watch retailers leaves no room for complacency. “As an independent, we have to constantly adapt and change our game,” he says.

Having been one of the first UK stockists for watch brands such as Japan’s Grand Seiko and French label Michel Herbelin, Porter opened a multi-brand watch store last year — the company’s third in the arcade.

Today, the family tradition continues: Porter’s wife, Rachel, joined the business this year and their son and daughter contribute to its social media feeds. “I love what I do and I’m very fortunate to have the business . . . but you have to be very passionate about it,” he says.

While Porter has expanded within the arcade, others are trying to land their first retail unit. When one such unit became available in 1993, jeweller Grant Mitchell leapt at the chance to move his fledgling jewellery stall in London’s Camden Market to a 150 sq ft unit in the covered walkway.

“They were like gold dust,” says Kyron Keogh, who in 2002 co-founded the jeweller Rox with Mitchell in the arcade and is, today, the head of the Glasgow City Centre Retail Association. “[Shop units] never came up in the Argyll Arcade. When we started Rox, 20 years ago, the market was pretty polarised,” Keogh recalls.

At the time, research indicated that, because of the concentration of jewellers with similar offerings, some buyers would leave the arcade not knowing which shop they had just purchased an engagement ring from. Keogh and Mitchell brought in their Thrill Room concept in 2011, greeting customers with a glass of champagne in a mirror-covered room furnished with velvet armchairs.

“We were inspired by the continental model of much more accessible spaces and energy,” says Keogh. “We felt, by making this statement with the Thrill Room, we really wanted to stand out.”

For Mitchell and Keogh — and for other local jewellers — the arcade acted as a training ground for expansion into the national market. Since opening

there, Rox now has three stores in Glasgow and five others across the UK. “It’s probably one of the most competitive places to trade . . . almost every single watch brand is represented in there,” says Keogh. “If you can trade successfully in the Argyll Arcade, you should be able to trade successfully anywhere.”

Across the light-strewn walkway, Chisholm Hunter, which was founded in Glasgow in 1857, now has three stores in the arcade alone and a further 25 across the UK. For retail director Max Brown, son of owner Harry Brown, the high-stakes customer focus essential for any retailer to survive in the Argyll Arcade was instrumental in the company’s expansion into the national market — where, in 2022, it saw an 87 per cent rise in sales, from £29mn to £54mn.

“Outside of perhaps [London’s] Hatton Garden, there is arguably no other jewellery retail space with such a concentrated level of competition,” says Brown. “If we don’t delight our client with our level of care, there will be another team in the arcade that certainly will.”

Rox’s Thrill Room concept has since been rolled out to the chain’s five other stores, including its recently opened boutique in London’s redeveloped Battersea Power Station. In 2021, Kering-owned brand Gucci partnered with Rox when it chose the Argyll Arcade for its first standalone UK store dedicated entirely to its watch and jewellery collections, showcasing the house’s newest lines, including the Gucci 25H, G-Timeless and Link to Love.

The draw of the arcade for brands such as Gucci is also being felt in neighbouring Buchanan Street — the busiest thoroughfare for footfall in the UK after London’s Oxford Street — where Watches of Switzerland runs mono-branded stores for Rolex, Omega, Tudor, Breitling and Longines.

The company’s investment in the city has personal significance for chief executive Brian Duffy, who grew up in Glasgow’s Castlemilk district and purchased his wife’s engagement ring in Argyll Arcade more than 40 years ago. “It’s a great place for us to invest,” he says. “There’s a great appreciation for fine watches in Glasgow. As a young man I’d look in the windows of Mappin & Webb and wonder how anyone could ever afford what’s there.” Next month, Watches of Switzerland will unveil a renovation of the Mappin & Webb store on the corner of Buchanan Street and the arcade.

For Duffy, this prized location speaks to the two thoroughfares’ symbiotic relationship. “There’s a natural reason to want the passing traffic of Buchanan Street,” he says, noting that watches and jewellery are items shoppers mostly buy in person. “Any development on one part of it is going to benefit the whole configuration.”

In September, the sixth-generation family jeweller Laings — founded in Glasgow in 1840 and based in the arcade for more than 50 years — opened its first standalone Tag Heuer boutique on Buchanan Street, with another to follow in Edinburgh next spring.

For Joe Walsh, Laings chief executive and husband of sixth-generation Laings owner Wendy Walsh, the choice of the street — which claims the highest rent of any in the UK outside London at £280 per square foot — is in part driven by a shrinking, post-pandemic retail landscape in which luxury brands increasingly desire to be on the highest-profile retail thoroughfares.

“There’s a shift across all the high streets, particularly in the watch and jewellery market,” he says. “Swiss watch brands are coming out of the multi-brand environment and opening their own dedicated boutiques.” Another contributing factor is the growth of social media, where luxury watch brands have become household names to an increasingly young demographic. “What everyone wants has become quite defined now; and it’s a brand.”

Having called the arcade home since 1971, next spring Laings will move to a new £5mn boutique and headquarters in Buchanan Street’s Art Deco Rowan House, of which £1.2mn has been invested in the largest watch repair workshop owned by an independent jeweller in the UK.

The expansion at the city’s oldest continuously run company, which also has stores in Edinburgh, Cardiff and Southampton, comes after Swiss watch exports to the UK rose by 21.5 per cent in 2022. “As watch sales have grown steadily over the years, the servicing grows exponentially behind that, as all the watches stay in the market,” says Walsh. “Because of that growth, we need to build watch facilities.”

The watch repair workshop, where prices start at £75 for simple maintenance and £200 for a complete service depending on complications, will employ 11 staff in total, with new recruits from the British School of Watchmaking working alongside colleagues who have worked at Laings for 30 years.

“The romance of watchmaking, that’s what appeals to watchmakers,” says Serena Gough, head of service at Laings and a graduate of the British School of Watchmaking herself. “It’s great to offer new career opportunities that aren’t locally available and see a skill thrive in an area it hasn’t before.”

But, while the Argyll Arcade and Buchanan Street have thrived on an influx of investment from independent jewellers and Swiss watch retailers, the rest of the city’s retail offering has suffered disproportionately since Covid, with city centre footfall remaining at 79 per cent of pre-pandemic levels. Though Glasgow has maintained its decades-held position as the top centre for retail spending in the UK outside London, its relatively small city centre population compared with other big cities has left its retail economy particularly exposed by the shift to hybrid working.

As part of an effort to double the city centre population to 40,000, two of the city’s largest shopping malls, St Enoch Centre and Buchanan Galleries, are set for demolition in the coming years. “The whole repurposing of Glasgow City Centre is under way,” says Stuart Patrick, chief executive of the Glasgow Chamber of Commerce. In August, the Chamber released a report proposing plans to diversify Argyle Street, Buchanan Street and Sauchiehall Street, the city’s so-called Golden Z of retail, with increased housing, urban parks and cultural hubs.

But, for Patrick, the strength of any city’s retail offering depends on independent retailers coexisting with large chain stores. “There is a lot of investment going into jewellery and watches on Buchanan Street, but we want to make sure that we maintain a full mix,” he says. “It was a good thing that the independents have held on to the jewellery trade. That gives us the opportunity to have some very distinctive investments happening.”

> ‘It’s a good thing the independents have held on to the jewellery trade. That gives us the opportunity to have some very distinctive investments happening’

Back in Argyll Arcade, Simon Porter is proud to have opened an independent, multi-brand watch boutique in such a competitive market. For Joe Walsh, who is determined to ensure the arcade units that Laings will vacate in 2024 remain in the hands of neighbouring jewellers, the shrinking bricks-and-mortar retail landscape brings new opportunities for the arcade. “I do believe in the future of the arcade,” he says. “Whether these are all jewellers in 10 years’ time, I don’t know. But, if not, it could include very high-end clothes boutiques.”

For Kyron Keogh, whatever change happens, the arcade’s legacy ensures its future is secure. “It would be interesting to see if the arcade over the next 20 to 30 years could maybe change a little bit,” he says. “The Argyll Arcade has been here for 196 years and it will be here for another 196 years.”

HUBLOT
BIG BANG UNICO
Magic Gold case, a scratch-resistant 18K gold alloy invented and patented by Hublot. In-house UNICO chronograph movement. Limited to 200 pieces.
HUBLOT

LOUIS VUITTON
HIGH JEWELLERY

Dima and Tania Nawbar tell *Kate Youde* how they broke into Lebanon's male-dominated industry, where Beirut's 2020 port explosion is still felt today

Lebanese business shows resilience out of the rubble

Above: Dima and Tania's great-great-grandfather founded the family's jewellery business in Beirut in 1891 (Daniel Carde/FT)
Left: (top to bottom) United Hearts band in yellow gold; Hass bangle; Fragments pinky ring in blue sapphire

It was "inevitable" that Dima and Tania Nawbar were drawn back to jewellery. "Growing up with a jeweller parent, you feel like you're part of a cult," says Dima, the elder of the sisters. "Everything you do revolves around jewellery."

As children, the pair would play after school in the workshop of the Nawbar store that their father, Elie, ran in London's Bond Street between 1981 and 1997, before the family moved to Lebanon the following year. They felt no pressure to join the family trade but, having tried other professions, found their hearts belonged to jewellery.

In 2011, they launched L'Atelier Nawbar and have since overcome hurdles — including the devastating port explosion that ripped through Beirut in August 2020 — to grow their fine jewellery business into an increasingly global brand.

Jewellery is in Dima and Tania's blood: their great-great-grandfather founded the family's jewellery business in Beirut in 1891. But, when the sisters took over from their father, they changed its creative direction by designing and making everything in-house, and pivoting away from its traditional gold and diamonds look. Their aim is "playfulness", says Tania, and to create "trendy", colourful pieces that can be layered and stacked by customers to express their own style. The latest collection, Psychedeliah, inspired by an abstract flower, includes 18-carat gold creations set with mother-of-pearl, malachite, agate, turquoise and diamonds.

The sisters added 'L'Atelier' to the business' name because they did not know if they "were going to ruin the family name" when they joined so wanted "a separate entity", says Dima, who handles finance while Tania heads operations. They both design the jewellery.

Judging from the feedback, the family's reputation is safe for now. Harrods, which has stocked the brand since 2019, extended a L'Atelier Nawbar summer pop-up in the British luxury department store by a month due to its popularity. Features included exclusive and limited edition pieces, and a "personalisation station" allowing customers to design their own jewellery using an app.

Getting to this point has not been without challenges. Tania says the jewellery industry is a "man's world" and suppliers her father had worked with initially thought the sisters were there to "play around". "They didn't really take us seriously in the beginning," she recalls.

The sisters also had to earn respect in the workshop they set up, dealing with artisans who used to drink alcohol at work, and converting naysayers to non-traditional creative techniques that they wanted to use for pieces such as reversible rings.

When a huge explosion levelled buildings in Beirut three years ago, killing more than 200 people, one of their two workshops was hit, as well as their store in Saifi Village and both of their homes. They considered relocating their workshops to other countries, but decided to stay put — not wanting to abandon their workers. They now employ 105 people.

"I still don't believe it, today, that that's what happened to us," says Tania. "If I hear a loud boom or a balloon pop, I scream and jump. These things that are silly little things around you affect us daily right now and I'm working on my kids to get over this . . . If they see broken glass now it's, 'Is that an explosion?'"

Their experience of the blast inspired the Fragments of Us collection. The designs comprise different pieces of stones and diamonds, reflecting the shards of glass they saw everywhere, and pay homage to people and places of Beirut.

"The year that followed [the explosion] was all about picking up your pieces, picking up parts of your lives,' remembers Dima. "We were displaced, none of us were living in our homes. Even our store was not functioning the way it used to.

"Beirut, itself, had landmarks that were on the floor, things that you're used to seeing everyday that are no longer there, parts of your heritage. So it was about your life being fragmented and all your memories."

Following the tragedy — and against a backdrop of Lebanon's ongoing financial crisis, with the country's banks imposing their own capital controls restricting withdrawals — the business has not only recovered but expanded. Sales grew by 16 per cent between 2020 and 2021, 32 per cent between 2021 and 2022, and 37 per cent in the most recent financial year.

L'Atelier Nawbar opened its second boutique, in Riyadh, in May. The brand's designs are also retailed in about 50 points of sale online and in-store in Europe, the US, north Africa, Asia, and the Middle East. Department store Bloomingdale's is holding a three-month L'Atelier Nawbar pop-up in Dubai until 1 January, including a charm bar where customers can personalise necklaces. A further eight to 10 stockists will be added next year, with the US a particular target for growth.

During the interview, the sisters contradict and interrupt each other. They "fight so much" at work, admits Dima — something their colleagues have picked up on. "On the big things, like the way we see our business — on our goals, vision, ethics, morals — we're aligned but, when it comes to daily stuff, we argue a lot. The minute we leave the office we become sisters again."

Their shared vision is to be able to pass down the family business. "And . . . [that] is a lot of pressure," says Dima. "Passing down the torch, you've got to keep it lit."

Other jewellers from Lebanon

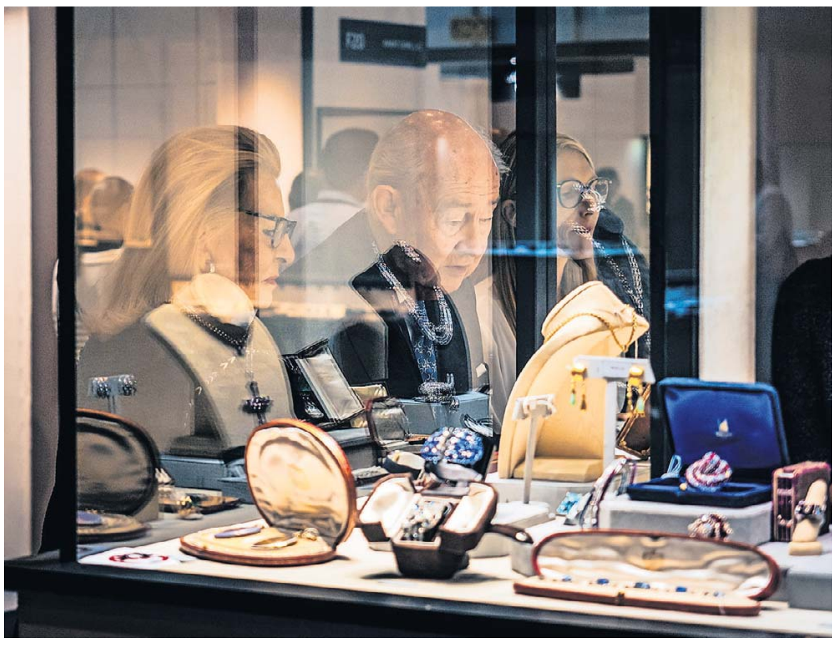
Nada Ghazal
The inspiration behind Ghazal's new collection Doors of Opportunity is a turquoise door she came across when house hunting in London. Her move last year from Lebanon was motivated by a desire to grow her brand internationally. Coming 20 years after her first collection, the new pieces are handcrafted from 18-carat brushed gold and pavé stones in her Beirut atelier.

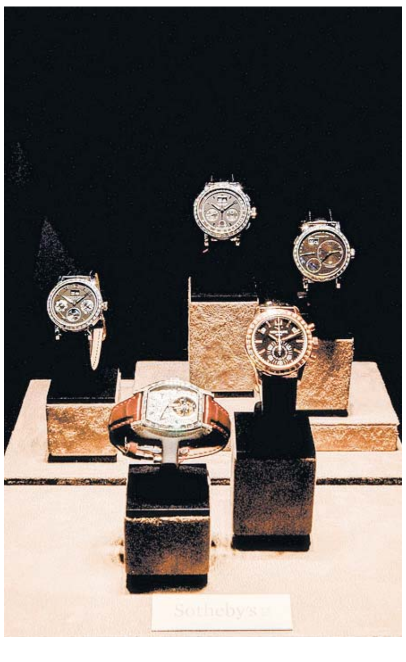
Walid Akkad
Born in Beirut, Akkad *(pictured left)* left Lebanon aged 17 and moved to Paris to train as a jeweller. He launched his own brand in 1989 and opened his gallery on the Left Bank in 2013. Known for sculptural pieces, he is unveiling a dozen limited-edition statement cuffs made from ebony, his first experimentation in the wood, at FAB Paris art fair November 22-26.

Gaelle Khouri
Khouri *(pictured below)*, who grew up in Tripoli and launched her eponymous brand in Lebanon in 2015, relocated to Dubai following the Beirut explosion in 2020 but travels back to the city regularly to meet with the artisans who make her pieces. She is launching her brand's first online boutique in December. Her pieces are currently sold online through stockists, including fashion platform Farfetch.

Platforms race to take a slice of the vintage jewellery market

Sector sees increased demand and a better organised supply, says *Milena Lazazzera*





From top left: GemGenève will see more vintage jewellery businesses attending; vintage watches at the Sotheby's Salon in Zurich
András Barta

The business of vintage jewellery is booming. New platforms dedicated to pre-owned jewellery are being launched on a weekly basis and, although vintage only makes up 5 per cent of the total jewellery market — estimated to be worth $350bn-$400bn — it is growing at a faster rate, according to Alexander Thiel, a partner at McKinsey in Zurich.

The sales channels are diverse. Last month, Sotheby's opened The Salon within Bucherer's Zurich store — its first permanent retail space dedicated to the luxury segment, including jewellery, following the launch of its online platform two years ago. September also saw traditional bricks-and-mortar resellers showcasing their jewellery at Lapada, the Association of Art and Antiques Dealers fair. Next month, GemGenève will feature even more vintage jewellery businesses. "Originally, we envisaged an annual event, but the feedback from our exhibitors and trade visitors led us to host the show twice a year," says Nadège Totah, a member of the board of GemGenève which, in May, saw visitor numbers up nearly a quarter compared with the 2022 event.

Ebay has introduced a certification scheme for watches and jewellery, while online ventures — such as Omneque, Castafiore, 58 Facettes, and Collector Square — have expanded their presence. For the past five years, even retailers focusing on the primary market, such as jewellery specialist Auverture and UK luxury fashion group Farfetch, have included pre-owned jewellery.

The wide range of vintage jewellers reflects the level of market fragmentation. However, while business models vary, they are all underpinned by the challenges of sourcing and selling vintage jewellery.

"The growth of vintage jewellery is driven by both increased demand and better organised supply," says Thiel. The demand stems from multiple consumer trends. Two-thirds of buyers look for rare pieces to differentiate themselves, while the remaining third are hunting for bargains on so-called icons, highly recognisable jewellery, usually from bigger brands, signalling status.

"Both groups are lured by the aura of exclusivity, but are confronted by the risk of fake," adds Thiel.

On the supply side, while the rise of online shopping has benefited most retailers by driving growth, sourcing pieces and verifying their authenticity remain considerable hurdles. Several brands and established retailers who have embraced vintage watches have so far shunned a similar opportunity with jewellery. Appraisers and authenticators trained at auction houses are in high demand among new businesses launching vintage jewellery, not only because of their skills in ascertaining the quality of the products but also because of their contacts in the trade to source goods.

Sotheby's is eager to exploit its experience in sourcing and authenticating antiques in order to grow. Josh Pullan, head of Sotheby's global luxury division, says its business of selling pieces consigned directly to the company from private traders at a fixed price doubled in size between 2021 and 2022, with the average value of items sold increasing by 30 per cent to $7,000.

> For the past five years, even primary market retailers have included pre-owned jewellery in their offering

Masterclasses held in The Salon in Zurich help spread knowledge about hard luxury — generally defined as watches, jewellery and handbags — thus attracting new groups of collectors. "What we're doing now is combining the best of physical and digital worlds into the space, combining Sotheby's and Bucherer's expertise," Pullan says.

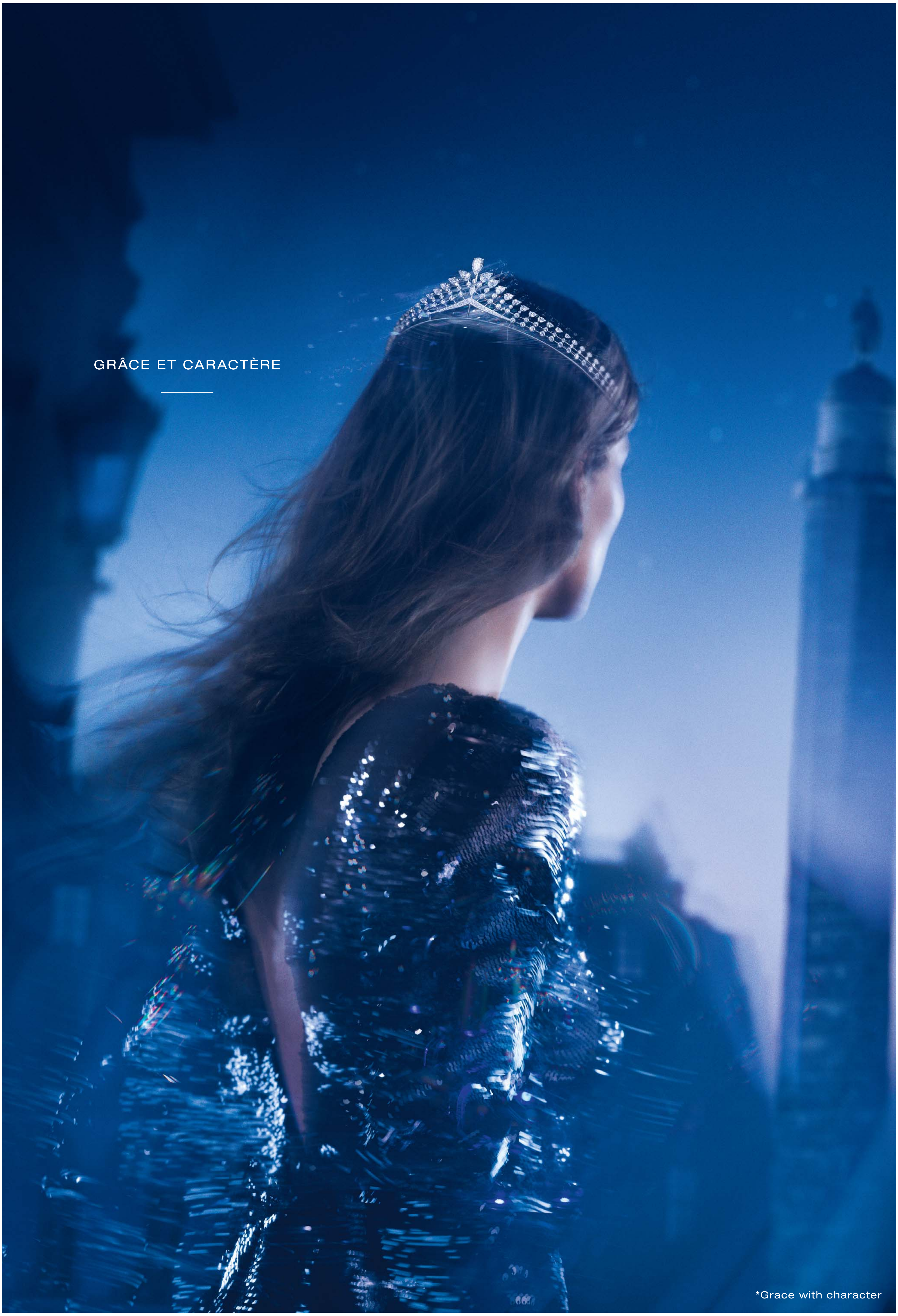
Lydia Tufnell, jewellery category manager at Farfetch, says that the introduction of vintage jewellery in 2019 is a critical factor of differentiation for the platform. "We partner with new boutiques and brands in order to continue sourcing unique supply," says Tufnell, with profit margins dependent on the jewellery's provenance, import and export costs and general demand.

Yet, although booming, the market for vintage jewellery has plenty of room to grow. "In the US, we estimate that second-hand jewellery represents about $1bn-$2bn, or 1-3 per cent of the overall US jewellery market — whereas second-hand watches represent about $4-$5bn, or about 35-45 per cent of overall US watch market," says Pierre Dupreelle, global leader for customer behaviour at the Boston Consulting Group.

"Additionally, the second-hand watch market has traditionally been more brand and model-driven than second-hand jewellery, leading to consumer focus on specific references. These factors explain why there has been less speculation in prices in this [jewellery] market as opposed to the watch market," he adds.

Although Cartier, Van Cleef & Arpels and Buccellati sell their own vintage pieces to clients, the offer is seen as more of a service than a business. The lengthy processes involved in authenticating jewellery — especially when they are set with various gemstones — and the difficulty of pricing the old next to the new have kept brands and large retailers away.

McKinsey's Thiel sees a scenario like that in the vintage watch market — where peer-to-peer online site Chrono24 emerged as the market leader in second-hand models — being replicated in vintage jewellery. "There is no inherent value for customers to have many fragmented platforms, marketplaces or retailers offering vintage jewellery, and consolidation is to be expected," he says. The Chrono24 of jewellery spot is still up for grabs.



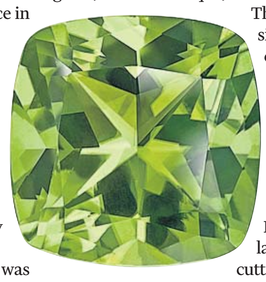
CHAUMET
PARIS

Watches & Jewellery

Fuli ramps up peridot mining operations

Experts praise the Chinese mine for taking a sustainable and integrated approach, writes *Elisa Anniss*

When a torch lights up the walls and roof at the Yiqisong Nanshan mine in north-east China, it reveals a galaxy of twinkling peridot, resembling stars fixed to a child's bedroom ceiling. The mine is home to the largest known exploitable rough peridot resource in the world and, with tracks to help transport the ore out still being laid, production is only just about to begin. Once in operation, this particularly bright grass-green peridot deposit will increasingly see the light of day.



Last month, Fuli Gemstones, the company behind the mine's revival, unveiled the brand's special custom cut at the Jewellery & Gem World trade event in Hong Kong as an example of how the company is ramping up its activities.

In July, a group of international industry specialists was invited by Fuli to see the mine for themselves. "Being a geologist, it was what I expected, because that is how the basalt is formed," says Dallas-based consultant, coloured gemstone gemologist and geologist Robert Gessner, on his first mine visit in China. "However, Fuli's peridot has a very green, saturated colour as opposed to what you typically see, which is more of a yellowish green."

Gessner has 21 years of coloured gemstone mining experience including a role as senior geologist with Gemfields' Kagem Emerald Mine, in Zambia, and Tanzanite One mine, in Tanzania. "I have visited many mines in South Africa, in east Africa," he recalls. "But this one, with its commitment to the environment and a pledge to keep every tree standing that it doesn't need to take down, there's a very deliberate effort here to make it symbiotic — mining with consideration for the environment. And I've not seen that anywhere else."

Fuli is currently licensed to operate the mine until 2026, with a possible further extension of 10 years. "That Fuli has exclusive rights and access to an identified deposit is also unique," adds Gessner.

The company expects to complete its overall mine site construction by the third quarter of 2024 and commence commercial production by the last quarter of that year. It aims to reach full capacity of processing 300,000 tonnes of ore with 58.3mn carats of rough extracted per year by 2030.

Compared with the mining operations of other gemstones, Fuli's processes are quite condensed due to everything being in close proximity. Its headquarters are in the city of Dunhua and, while staff are about to move to larger purpose-built premises soon, all processing, cutting and polishing of gemstones is undertaken in-house, with the mine only 31 miles away.

Such integration can be valuable for both investors and end consumers alike. Pia Tonna, Fuli's chief marketing officer and executive director, says the company is seeking to list on SGX's Catalist, the Asian rival to London's Alternative Investment Market, with the aim "to complete by the end of this year".

Fuli is currently licensed to operate the Yiqisong Nanshan site until 2026

"I've never encountered this scale of gemstone mining taken to such a professional level in China," says Andy Shen, a Gemmological Institute professor at China University of Geosciences in Wuhan. "What impressed me particularly is that Fuli has hired some very capable and trustworthy partners, such as SRK Consulting [which specialises in earth and water industries and mining exploration] to do the evaluations and mining prospecting. To do a survey on this scale, you need to dump money basically and invest."

The report, he says, is the most comprehensive piece of mining literature on peridot he has ever seen.

Shen is an expert on peridot, having written academic papers that explore the subtleties and difference in quality from the world's key deposits in Myanmar, Pakistan, North Korea, and the San Carlos mine in Arizona.

"You don't get a lot of gem quality materials coming out of those other deposits," he says. "The supply is not stable and suddenly you might not get the output anymore."

For Shen, the Fuli mine's peridot quality and quantity are unprecedented. So far, the largest chunk of peridot extracted is a 301-carat gemstone found during the geological survey three years ago. "This mine seems to have fewer perturbations or influences from the surroundings, so you don't have natural geological processes that can squeeze, heat disrupt larger stones into fragments," he says.

As a result, Shen expects some "really nice sized stones" to be uncovered and, as a reliable source, Fuli could be of interest to high jewellery companies.

Leanne Kemp, chief executive and founder of Australia-based supply chain group Everledger, says: "To me, the mine signified the convergence of a rare opportunity delving beyond the realm of precious gems into a world where zero waste, ecological equilibrium and sustainable economics become the driving forces, forging a path towards responsible mining practices." Everledger provides digital technology solutions that can increase transparency in supply chains.

Most recently, the company has worked on mid-market UK jewellery chain Ernest Jones's responsible and traceable Origin initiative, and partnered with retailers such as New Zealand's Diamonds.co.nz and ethical jewellery company Brilliant Earth. "Fuli is undoubtedly thinking in a future fit way with the chance to make a significant paradigm shift from the norm."

If Everledger takes up Fuli's environmental, social, and corporate governance efforts, Kemp estimates it will involve two to three additional mine visits and 12 months of dedicated work to establish full end-to-end frameworks, including rigorous scientific peer reviews.

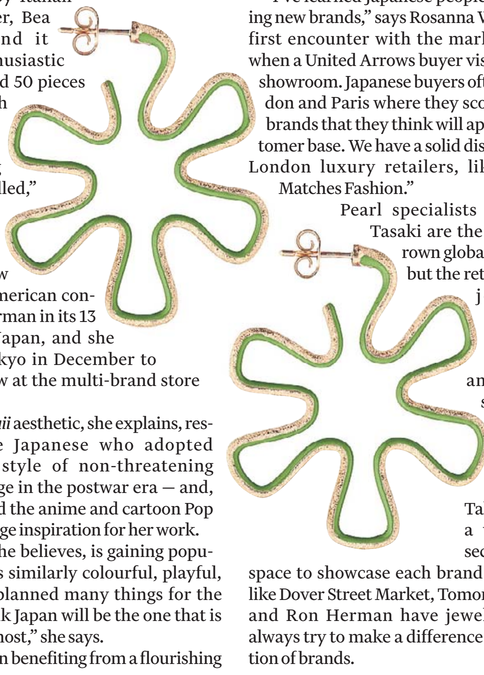
> 'I've never encountered this scale of gemstone mining taken to such a professional level in China'

Peridot has often been compared with diamond, as both originate in the earth's mantle. But, having recently been involved with PearlPoints — helping pearl farmers commit to sustainability and reduce ecological impact — Kemp is more inclined to compare peridot with pearls. "Pearls clean the ocean, companion with mangroves and reduce carbon. Peridot, in its very nature, companions with basalt and olivine that have unique environmental properties."

Japanese appetite grows for more independent European brands

The country has become the world's second largest jewellery market, trailing only the US, writes *Francesca Fearon*

Earlier this year, the multi-brand store Dover Street Market in Ginza, Tokyo's premier shopping district, hosted a trunk show of colourful enamel designs by Italian jewellery designer, Bea Bongiasca — and it received an enthusiastic response. "We sold 50 pieces in the first month and, after that, all the other stores started contacting me and it snowballed," says the jeweller.



Bongiasca's vibrant linear designs are now also carried by American concept store Ron Herman in its 13 locations across Japan, and she will return to Tokyo in December to stage a trunk show at the multi-brand store Shihara Lab.

Bongiasca's *kawaii* aesthetic, she explains, resonates with the Japanese who adopted this "cuteness" style of non-threatening imagery for signage in the postwar era — and, from this, emerged the anime and cartoon Pop Culture that is a huge inspiration for her work.

Her jewellery, she believes, is gaining popularity because it is similarly colourful, playful, and fun. "We've planned many things for the market, and I think Japan will be the one that is going to grow the most," she says.

She is not alone in benefiting from a flourishing appetite in Japan for independent European brands in the fine and demi-fine jewellery sectors. Otiumberg, founded seven years ago by sisters Christie and Rosanna Wollenberg, now has eight stockists in Japan — including multi-label stores United Arrows and Tomorrowland — and has seen online demand in that market for their solid gold huggie hoops and small gold vermeil earrings grow 200 per cent. Customers appear to appreciate the brand's pared back aesthetic. The sisters are also about to launch on Line, a popular messaging App in Japan run by South Korea's dominant internet search engine, Naver.

"I've learned Japanese people love championing new brands," says Rosanna Wollenberg. "Our first encounter with the market was in 2021 when a United Arrows buyer visited our London showroom. Japanese buyers often travel to London and Paris where they scout international brands that they think will appeal to their customer base. We have a solid distribution among London luxury retailers, like Liberty and Matches Fashion."

Pearl specialists Mikimoto and Tasaki are the biggest homegrown global brands in Japan but the retail landscape for jewellery is divided between small jewellers, concept stores, and department stores. Two of Japan's largest department store operators, Isetan and Takashimaya, have a wide jewellery section, but limited space to showcase each brand. Concept stores like Dover Street Market, Tomorrowland, Beams and Ron Herman have jewellery areas and always try to make a difference with their selection of brands.

Mimi Hoppen, global jewellery director of Dover Street Market, says that visitors to the Ginza store are "probably slightly different to [those in] department stores or other shops in Japan as customers are usually looking for something a little unusual". Although the Japanese customer has traditionally chosen small and dainty pieces, that is not the experience at DSM, where the trend is for big and bold with brands like Castro Smith, Bunney and Monies. "There is an appetite to discover new brands and designers, definitely with a quirky edge, even the delicate and fine brands that do well have a point of difference," she adds.

Shihara Lab is another concept store with a rotating roster of jewellery brands. "I wanted to create a space to introduce jewellery brands that were less accessible in Japan, and host exhibitions and exclusive trunk shows to bring together a vibrant jewellery community," says founder Yuta Ishihara. He has introduced Dutch designer Bibi Van Der Velden's animal and mystical creature jewellery, Londoner Alice Cicolini's intricate patterned enamels set with gemstones, and Francesca Villa's storytelling pictorial jewellery from Italy. "Although social media has become a popular platform for people to discover jewellery, I still believe in the importance of people experiencing jewellery first hand as it is such a personal item," Ishihara says.

He points out that, unlike in other parts of the world, Japanese consumers still prefer shopping in stores rather than online. And, while customers in Europe and the US tend to wear jewellery as part of their everyday lifestyle, those in Japan remain focused on the idea of jewellery for special occasions. "We hope we can introduce our customers to new jewellery brands and propose the idea of jewellery as an extension of their self-expression and less as decoration."

> Unlike other parts of the world, Japanese consumers still prefer shopping in stores and reserve jewellery for special occasions

Nevertheless, those special occasion purchases have propelled Japan to the world's second largest jewellery market, trailing only the US, according to a recent report by American market research consultancy, Spherical Insights. Japan's jewellery market size was valued at $9.62bn in 2022 and is expected to reach $28.25bn by 2032.

That rise in consumer spending could well be a product of Japan's Nikkei index surging to a 33-year high in May of this year, supported by a recovering economy and an inflow of foreign investment. Wages have grown and this has increased confidence among consumers. Bain & Company's Luxury Report noted that luxury sales in Japan grew 18 per cent in 2022, catching up with its pre-Covid levels, helped by the return of tourism. The growing interest in jewellery could well boost the figures further for 2023.

Designers Sophie Bille Brahe, Robinson Pelham and Cece Jewellery all report growth in Japan. Robinson Pelham's curated EarWish range of dainty stud earrings and charms was originally inspired by the Japanese custom of hanging little plaques expressing personal wishes in their temples.

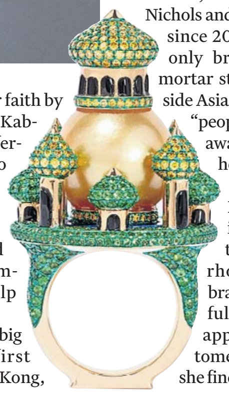
Cece Jewellery is hosting trunk shows in the Aoyama area of Tokyo this month and is launching a special talismanic enamel design for her bespoke signet rings and pendants for that market, featuring the mythical rabbit and the moon from Japanese folklore.

Sophie Bille Brahe's Scandi-style minimalist collections of pearls, including Japanese Akoya, and diamond designs are stocked by Isetan and other concept stores. "Luxury consumers are looking to exclusive fine jewellery brands now more than ever," she says. "Customers are seeking something with a unique design, something with a point of difference from what's already available at more established fine jewellery houses."

Clockwise from top: Bea Bongiasca Margherita 9ct gold enamel earrings; Bea Bongiasca Long Vine earrings in peridot-pink enamel and 9ct gold; Sophie Bille Brahe Botticelli Rose pearl earrings; Otiumberg 9ct gold Bamboo ring

Technique Austy Lee's multicultural designs and his melding of traditional and modern techniques start to draw a bigger crowd, writes *Kate Youde*

'Jewellery is still boring in this moment'



Clockwise from main: Austy Lee; golden flower with Coleus rings; Annoushka x Austy Lee 18ct rose gold St Petersburg ring; Annoushka x Austy Lee Moscow ring; Tree of Life brooch

'Many customers keep coming to make something new so I need to draw five to 10 designs every night'

Austy Lee works through the night sketching one-off creations. "I have many customers who keep coming to make something new so I need to draw five to 10 designs every single night," he says.

The Hong Kong jewellery designer catches about five hours' sleep in the morning before heading to one of his two boutiques in the city. "I have had no holiday for five years," he says.

While this work/life balance is probably not to be recommended, there is a sense when meeting Lee that he might not want it any other way. The prolific creative, who finds he is at his most productive in the early hours, also designs his own clothes, shoes and spectacles.

Lee was one of five "new" designers featured at GemGenève in May. It was the first appearance of his brand at a jewellery show outside Asia. Now, with plans under way to grow the number of international stockists for his designs, he may have to burn even more midnight oil.

A former graphic designer who studied product design, Lee trained in jewellery design with Swiss house Adler in Hong Kong before working as chief designer for local jeweller Wendy Yue. He launched his eponymous brand in 2017 to showcase his own "crazy" and "joyful" fine jewellery.

Over the past six years, he has designed more than 6,000 unique jewels, made in Hong Kong. The bold pieces stand out not only because of Lee's use of coloured gemstones and jade but also because of his way of melding traditional and modern techniques.

Having learnt from his uncle, who was experienced in repairing antiques, his contemporary jewels often incorporate antique objects such as Japanese lacquerware and *netsuke* — small Japanese sculptures. He uses traditional processes such as the Japanese Maki-e and Shakudō lacquer techniques, and the Shibayama art of inlay for creating designs on abalone shell and mother of pearl. But Lee embraces the modern, too: his 18-carat gold pieces are plated with colour rhodium to create eye-catching hues. "I like chunky, complicated details [and] edgy things," he says.

His Buddhist faith is a source of inspiration for Lee, whose pieces all have a story behind them. "Buddhism is a spiritual exercise, through meditation taking my mind to a whole new level, brainstorming new ideas every day," he says. "I like painting and admiring thangkas [paintings on cotton or silk depicting subjects, including Buddhist deities and mandalas] because the different geometric proportions and colour combinations are very impressive and inspiring to me."

His debut collection, Psychedelic Light, drew on mandalas — geometric, symbolic designs representing the universe that are used in meditation.

Lee, whose recent collection Gnostic Vines draws from another faith by featuring elements from Kabbalah, is interested in different cultures. He also encourages the jewellery design students he teaches at Hong Kong Baptist University to do research, and meditate to know themselves better and to help develop their own styles.

Lee had to explain his "big jewellery" when he first opened up shop in Hong Kong, with customers thinking his designs were costume pieces. Despite the high profiles of Chinese jewellery artist Wallace Chan and Taiwanese jewellery designer Cindy Chao — both known for their colourful statement pieces — Lee thinks that, in general, "jewellery is still boring in this moment", with consumers opting for well-known brands because of marketing. "I want this kind of choice to be popular," he says.

His designs are gaining traction. Annoushka Ducas, founder of British jewellery brand Annoushka, has stocked Lee's pieces in her retail spaces in London department stores Harrods, Harvey Nichols and Liberty since 2018 — his only bricks-and-mortar stockist outside Asia. She believes "people are definitely more aware of him". But Ducas says her staff have to educate clients so they appreciate Lee's approach, with British customers tending not to understand coloured rhodium and being "less brave" with large and colourful jewellery. Lee's designs appeal particularly to customers from the Middle East, she finds.

"[Lee's work] is so unique and recognisable, and the techniques that he uses really push the boundary," says Ducas, who collaborated with Lee on four cocktail rings for her Touch Wood collection in 2020.

International auction houses Phillips and Bonhams have offered Lee's jewellery in sales in Hong Kong over the past few years. Online marketplace 1stDibs and Dubai-based platform Theodore and C started stocking his designs last year.

Lee says contacts he made at GemGenève may lead to him collaborating with other brands and that his presence at the fair helped boost international sales, which are up 20-25 per cent year on year. Sales outside Hong Kong account for about 30 per cent of Lee's business, compared to 10 per cent a few years ago. Already stocked by retailers in Japan, the Philippines and Singapore, the brand is now working with department store Lane Crawford to sell pieces in Chengdu and Beijing, China, next month. Separate negotiations are under way with stores in New York and Paris.

Expansion could add to his heavy workload. But Lee, who has 11 employees excluding his studios, does not want to hire anyone to help with design. "If you want to buy Austy Lee, you want Austy Lee," he argues.

School of jewellery opens in Shanghai

L'École, School of Jewelry Arts, supported by Van Cleef & Arpels, which opened a new campus in Shanghai this week, has staged a programme of events to coincide with Golden Week in China. A new Middle East hub is to open in Dubai the week of November 20 with an exhibition, *Garden of Emeralds*, and a lecture series ahead of the launch of courses and workshops from April next year. The jewellery education organisation is opening a third new base, its second in Paris, at Hôtel de Mercy-Argenteau today. This location features an exhibition space, a library and a bookshop dedicated to titles on jewellery.

Going green

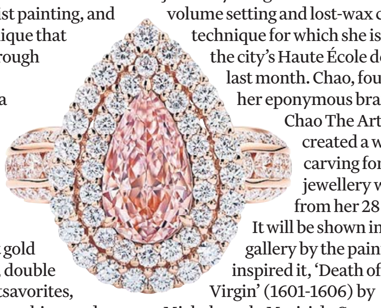
Sotheby's is offering key jade pieces in its Magnificent Jewels sale in Hong Kong today. A jadeite and diamond necklace (c 1990s), set with 29 graduated jadeite beads with a translucent green colour, is expected to fetch HK$18mn-HK$28mn ($2.3mn-$3.58mn), while the Imperial Blossom jadeite and diamond parure (c 2000) *(right)* is estimated at HK $26.8mn-HK$38mn. This latter set includes 12 highly translucent jadeite cabochons of intense emerald green colour mounted on a necklace, with a further three cabochons mounted on a pair of earrings and a ring. Some of the cabochons are imperial green in colour, the most coveted hue for jadeite.

Opal opulence

Boghossian is unveiling new opal jewels in its Hong Kong boutique this autumn in response to rising customer demand for unusual stones. The Opal Opulence mini capsule collection's three pieces all feature black opals. One pair of asymmetrical earrings with diamonds comprises two black opals and two rare boulder opals, while a second pair features two Australian black opals with uncommon shades of orange. The jeweller has emphasised the vibrant hues by setting these stones atop two citrines and beside spessartine. A ring features a 7.9-carat cushion-shaped black opal surrounded by white opal beads, diamonds and demantoids.

Making an impression

Chinese jeweller Feng J is unveiling 12 one-of-a-kind pieces at the FAB Paris art fair, being held at Grand Palais Ephémère, on November 22-26. The designs showcase her signature use of coloured gemstones and diamonds to mimic an Impressionist painting, and her Floating Set technique that allows light to pass through stones. Her new Pink Anthurium brooch is a variation on the same theme as the Blue Anthurium brooch acquired by the Museum of Fine Arts, Boston in May. The titanium and 18-carat gold piece features spinels, double rose-cut morganites, tsavorites, chrysoberyls, yellow sapphires and white diamonds.



More is more

An exhibition at Boucheron's new flagship store in Ginza, Tokyo, will highlight the creative knowhow behind the French house's high jewellery. The shop, which opened last month, has a fourth-floor Innovation Lab that gives customers insight into the techniques, materials and processes behind designs. The exhibition will celebrate the brand's latest More is More collection until November 21, before focusing on pieces from previous collections until January 31. These include two Eternal Flowers rings from Nature Triomphante (2018), which feature real petals, and a bracelet from Contemplation (2020) made with aerogel, a material used by Nasa.

Rare rolling stones

Bonhams is offering five pieces by Kat Florence in its Hong Kong Jewels and Jadeite sale on November 25. Known for her use of rare stones, the jewellery designer's diamond ring with a central internally flawless 2.03-carat light pink diamond *(top)* is expected to fetch HK $650,000-HK$950,000, while a pendant with a 33.37-carat Paraiba tourmaline and diamonds is estimated at HK$95,000-HK$150,000. A highlight of the 150-lot sale is an unsigned platinum and 18-carat yellow gold bracelet set with 31.88 carats of Columbian emeralds and 24.81 carats of diamonds. It is estimated to achieve HK $4.8mn-HK$5.8mn.

Wax lyrical

A wax sculpture by Cindy Chao will be on display in the Louvre museum in Paris on November 24. The Taiwanese jewellery designer tutored a course in volume setting and lost-wax casting, a technique for which she is known, at the city's Haute École de Joaillerie last month. Chao, founder of her eponymous brand Cindy Chao The Art Jewel, created a wax carving for a piece of jewellery with input from her 28 students. It will be shown in the art gallery by the painting that inspired it, 'Death of the Virgin' (1601-1606) by Michelangelo Merisi da Caravaggio.

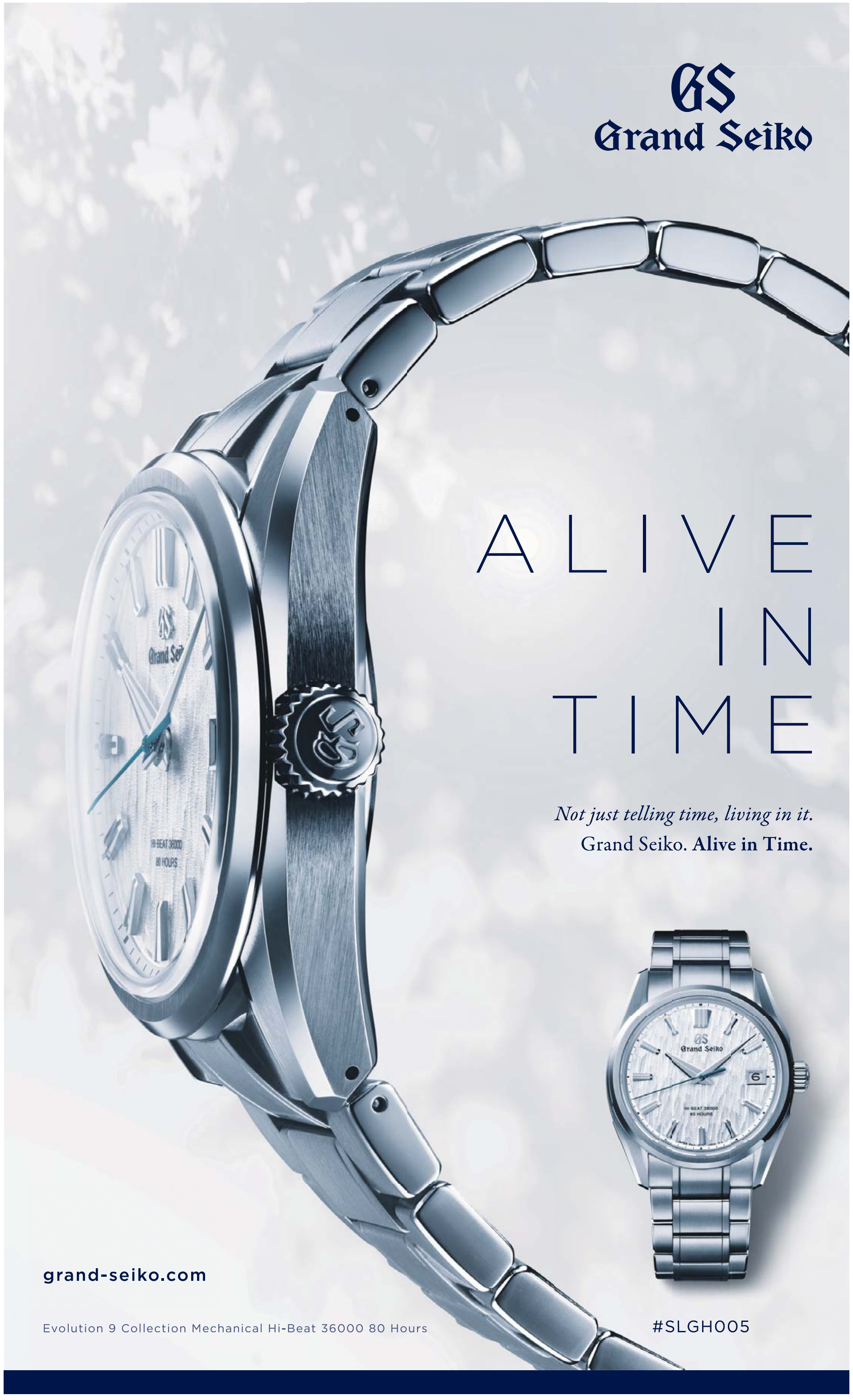
PAD in London

Objet d'Emotion by Valery Demure will show the work of Tokyo atelier Hum at PAD London, October 10-15. The Japanese brand's new 15-piece Industrial Diamond collection, being launched at the art and design fair in Berkeley Square, features lab-grown diamonds sourced from California producer Diamond Foundry. The designs include three one-of-a-kind platinum rings with central stones of approximately one carat and side stones that are either brown or white diamonds. Other exhibitors showing jewellery include Indian jewellery designer Neha Dani, German house Hemmerle, British creator Glenn Spiro and Elisabetta Cipriani, whose eponymous London gallery specialises in jewellery by artists.

A charmed life

British jewellery brand Annoushka is launching a bespoke design service in its two Hong Kong stores on October 16. My Life in Charms, which has been available in the UK for a number of years, allows customers to commission personalised 18-carat gold charms. The brand's audio podcast, My Life in Seven Charms, in which company founder Annoushka Ducas interviews high-profile women and creates charms that reflect their life stories, will now be accompanied by video content with subtitles in Chinese. The jeweller will also offer its wider bespoke design service for all jewellery.

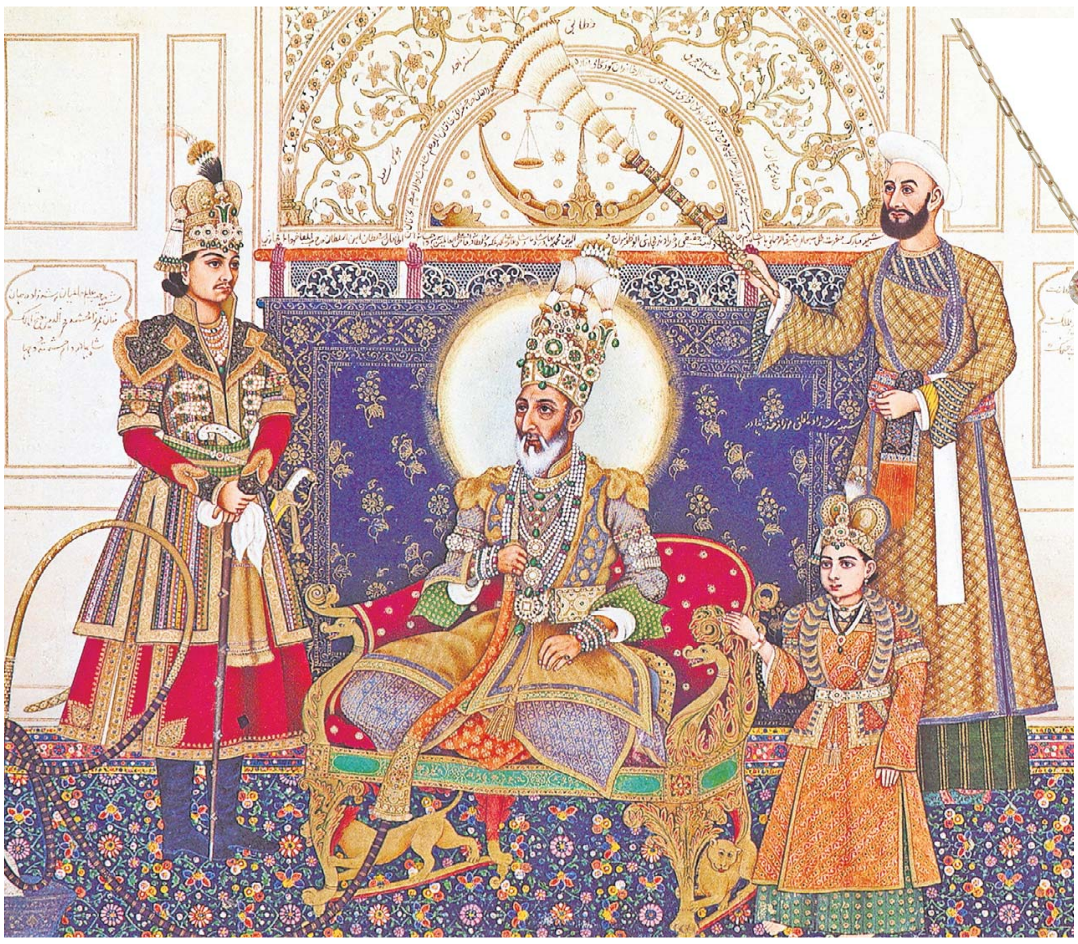
Kate Youde



Watches & Jewellery

The empire's exquisite craftsmanship is proving a rich source of inspiration for the next generation of Indian jewellers, writes *Melanie Abrams*

Why the Mughal aesthetic isn't a thing of the past



When India's Mughal emperors commissioned glittering jewellery, little did they realise that, centuries later, these pieces would still have creative and commercial value for the country's homegrown jewellery designers.

Keeping the embers aflame are new books on Mughal jewels, as well as international museum displays showcasing objects ranging from bejewelled daggers in the Louvre in Paris to a pearl forehead ornament in the Museum of Fine Arts in Houston.

For Salam Kaoukji, curator of the Al-Sabah Collection in Kuwait, the appeal of Mughal jewels for today's practitioners lies in their aesthetic and their makers' techniques.

The Kundan setting technique, for example, which uses soft 24-carat gold ribbon to set gemstones directly on to surfaces, is still used today. So is the mosaic-like inlay technique called *pietra dura*: seen on the walls of the Taj Mahal, it is practised by local jewellers such as Hanut Singh and Vishal Kothari, founder of VAK Jewels.

The Mughal dynasty, which lasted from 1526 to 1858 — when the last emperor, Bahadur Shah II, was replaced by the British Raj — is defined by colourful, swashbuckling characters. The most sophisticated jewels were made in the 16th and 17th centuries, when the Mughal empire was at its height, writes Kaoukji in her upcoming book *Adornment and Splendour: Jewels of the Indian Courts*.

That era marked a way of making and wearing jewellery that continues to this day. The emperors "wanted to show their power, but they showed it not only in richness, to have more and more stones, [but] in a delicate kind of making jewellery", says Cornelie Holzach, director of the Pforzheim Jewellery Museum.

Holzach is the curator of the *Historical Mughal Jewellery and Objets d'Art* exhibition, due to open late next year, which includes bejewelled weapons, pendants and brooches from a private collection.

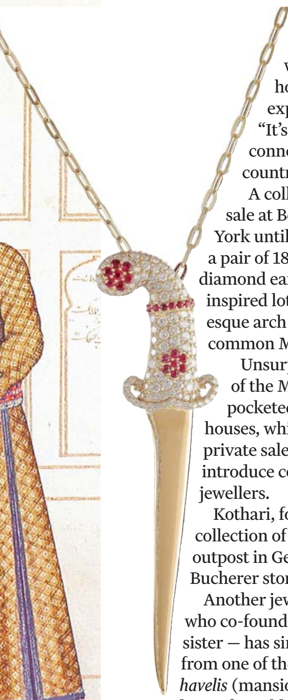
Several jewellers are continuing to base their work on the Mughals. Farah Khan Ali, a jewellery designer based in Mumbai, launched her business in 2004 and says the motifs enable her "to be different" and "appeal to a universal audience".

Her diamond Scherazade necklace riffs off paisley — or *boteh* — patterns that were introduced to 16th-century India by the Mughals. She added uneven tanzanites, she says, "because if I gave it a pear shape at the bottom, it would look more traditional".

Khan Ali's strategy is to appeal to "today's millennials [who] want to wear jewellery more often" instead of storing it. But, while their spending capacity is increasing, especially in cities like Jaipur and Lucknow, the younger generation still cannot afford to buy jewellery from international luxury houses, she says.

Some jewellers use Mughal motifs in a literal way. Hanut Singh turns weapons, like daggers, into pendants. Vishal Kothari, however, prefers a subtle approach; otherwise the piece "becomes very traditional", he says.

Unusually, Kothari has used portrait-cut diamonds for a minimalist collection. Visually, there is no connection to the Mughals, but the cut is associated with Emperor Shah Jahan — fabled for building the Taj Mahal — who had hand-painted or enamelled portraits of himself with a "portrait diamond . . . covering for it, instead of glass", Kothari explains.



Associating collections with the Mughals helps homegrown Indian designers expand internationally, he adds. "It's the first thing that people connect from abroad to the country."

A collection of VAK jewellery is on sale at Bergdorf Goodman in New York until next March, which includes a pair of 18-carat white- and pink-gold diamond earrings in the shape of Mughal-inspired lotus flowers, with Taj Mahal-esque arch designs and spinels — a common Mughal gemstone.

Unsurprisingly, the artistic heritage of the Mughals attracts deep-pocketed art collectors and auction houses, which are increasingly hosting private sales and exhibitions that help introduce collectors to the homegrown jewellers.

Kothari, for example, is selling a collection of jewels at Sotheby's new outpost in Geneva, on the third floor of the Bucherer store, starting on Monday.

Another jeweller, Namita Bhandari — who co-founded Jaipur-based Azga with her sister — has simplified a window engraving from one of the city's Mughal forts, or *havelis* (mansions), to create an intricate design for gold-plated brass and enamel Mughal cufflinks and buttons for ceremonial *kurtas* (collarless tunics). They look rich, she says, and "add heritage to the label".

Bhandari is capitalising on the changes in India's jewellery buying habits, thanks to social media, celebrity endorsements and influencers. "People want to buy more jewellery," she says. "They want to wear something new, something different. They want [jewellery] to match their outfit." They also, she adds, want to give jewellery as gifts to friends.

At Studio Renn in Mumbai — co-founded by husband-and-wife duo Rahul and Roshni Jhaveri — Mughal coins, which creative director Rahul has been collecting since 2019, are used for Mohur buttons on a *sherwani*, the formal long-sleeved coat worn during the late Mughal period, and a Bandhgala suit. A set of five were priced at $30,000. "Mughal coins are perceived as more valuable," Rahul says. A 25-year-old man bought the first set in 2020 for his wedding, and has since become a regular customer, according to the Jhaveris.

Local jewellers are expanding their bricks and mortar presence, too. Azga is planning to open its first store in Jaipur next year, while Khan Ali aims to open four standalone stores at home next year, as well as rolling out more concessions across the country.

Clockwise from main: 19th-century painting of Bahadur Shah II, the last Mughal emperor; Hanut Singh's dagger pendant; VAK white gold and diamond earrings; Hanut Singh's leaf pendant; Farah Khan Ali's Scherazade necklace

GRANGER - Historical Picture Archive / Alamy

Brands assess benefits of maintaining proper archives

Investment in heritage increase secondary market value, writes *Milena Lazazzera*

Next month, the Louvre in Abu Dhabi will host the 40th monographic exhibition of Cartier jewellery titled *Cartier, Islamic Inspiration and Modern Design* — the third after those in Paris and Dallas focusing on Cartier and Islamic art, but with additional documents and items resulting from the house's continuous research.

The number and pace of such jewellery exhibitions in museums and galleries has increased since the end of pandemic-related restrictions. Last summer, Tiffany & Co had a 400-piece show at the Saatchi Gallery in London, followed by Van Cleef & Arpels with its *Art of Movement* exhibition at the Design Museum. Chaumet has also just opened the Paris private salon above its boutique to the public for *Un Âge d'Or* (A Golden Age), showcasing the house's jewels from the 1970s.

Such exhibitions are possible only thanks to businesses investing in their archives, with specialists poring over documents, organising ledgers and buying back historically significant pieces. Exhibitions of original pieces show how, in jewellery, the present and the past are intertwined: business is all about enticing with the new, but desirability is burnished by elevating the heritage.

While the archive has become, for many, a strategic priority only in recent years, others have recognised its importance from an early stage.

An archiving policy has been in place at Cartier since the house's founding in 1847. In the early 1900s, the practice of taking real-scale photographs became mandatory for all its major creations. However, the turning point was in the 1970s when Cartier identified its archive as an asset and reorganised it, says Pierre Rainero, Cartier's director of style, image and heritage. In 1983, resources were allocated to create the Cartier Collection, an ensemble of significant pieces, which, this year, celebrates its 40th anniversary. Among the approximately 3,500 prized items are a mystery clock from the early 1900s *(pictured left)*, and the jade necklace that once belonged to Barbara Hutton *(pictured right)*, which Cartier bought for $27.4mn at a Sotheby's auction in 2014.

Rainero says the objective was to share the "artistic dimension and the exceptional craftsmanship" with as many people as possible, right from the start. This led Cartier to discard plans for its own museum in favour of exhibitions taking place worldwide that would offer greater visibility. "Cartier does not curate its own exhibitions, which means that we want and value an outside view of our production coming from museum curators," says Rainero. He notes how the exhibitions are initiated by the cultural institutions. "Museum curators appreciate us because, when they visit our archives, they find all possible documents linked to the pieces," adds Pascale Lepeu, curator of the Cartier Collection.

"Exhibitions are about connecting a wider audience to the brand, bringing us closer to these otherwise distant objects and rarefied worlds," says Rebecca Robins, a brand adviser and author. "They are about demonstrating the influence of the brand over time. It's about building cultural capital," she adds.

But Bernstein's luxury analyst Luca Solca also sees a financial logic in them. He says archives and public showcases increase a brand's secondary market value and provide "trustworthiness, and almost a claim to gentrification as if new money is desiring old money's security".

Van Cleef & Arpels and Boucheron also began their archiving policy early but it became a strategic focus only recently, with collections totalling about 2,200 and 800 items respectively.

"Although the collection is 100 years old and we have always kept an eye on pieces on the auction market, the department has been more active over the past seven years," says Boucheron chief executive Hélène Poulit-Duquesne. Boucheron's historical pieces are regularly exhibited alongside contemporary work in the house's short temporary travelling exhibitions named *La Maison*. Moreover, the company's drawings and antique pieces inform Histoire de Style, a high jewellery collection which, every year celebrates elements from the company's archive, such as the Question Mark necklace in 2020 or the late Queen Elizabeth II's brooch this year.

Other jewellers have had success with bringing historical pieces back the shop floor. Founded in 1613, Mellerio dits Meller lays claim to the oldest jewellery archive of Place Vendôme. Besides sketches, ledgers and drawings, it also comprises display cases by Fourdinois, a cabinetmaker from the mid-1800s, and the Marmotte — the trunk that Jean-Baptiste Mellerio wore on his back when selling jewellery on the streets.

Age-old story: the archives at Cartier's Paris boutique offer a glimpse into past collections

But a recent reorganisation of Mellerio's archives led to a remarkable effect on sales.

In a bid to tell the history of the house with a bejewelled symbol associated with a muse (a cross for 17th-century Marie de' Medici, a flower for 18th-century Marie Antoinette, a dragon's wing for the courtesans of the 19th century), some inspiring drawings were moved to the boutique floor, while downstairs, Mellerio created a mini-museum. Creative director Laure-Isabelle Mellerio says clients feel an instant familiarity, "since everything I create is inspired by our archive." She also often witnesses customers, impressed by the archives, who then buy something new.

Similar tales are often recounted by the executives at Bulgari which, since 2014, has had a permanent exhibition space in its boutique in Rome. At Garrard, chief executive Joanne Milner proudly shows her clients the first Garrard ledger, which details the origins of the brand's royal heritage. "The initial entry is for the Prince of Wales, who became our first royal patron in 1735, the year in which Garrard was founded," she says.

Chaumet also shows off its own famous clientele. In 2020, it opened its document room to researchers, curators and selected clients. "When clients come here [the archives room on 12 Place Vendôme] and they see the drawings, the names of the clients on the ledger, Empress Eugenie, Picasso, Eiffel, they see all our history," says archivist Claire Gannet. "They are not just buying a product, but they are buying a piece of history."

Private museums add lustre to Asia's jewellery

Outreach More and more collectors want to bring their enthusiasm to a wider public, writes *Elisa Anniss*

Clockwise from left: Shenzhen Jewelry Museum opened in 2019; a piece from its 40-year retrospective of the jewellery industry; the recently opened Chen Treasure Culture Art Museum specialises in jadeite and carving

In recent years, museums dedicated to jewellery and gemstones have been mushrooming across China and the Far East. "For some time, we have been observing that there are private collectors building or equipping their own museums," says Cornelie Holzach, director of the Pforzheim Jewellery Museum in Germany. "That the subject of jewellery, and jewellery museums in particular, is experiencing such an upswing in Asia is an excellent development and exciting to see."

Guangdong province, China's economic powerhouse, is home to the Shenzhen Jewelry Museum. Its newest private art institution, Chen Treasure Culture Art Museum, specialises in jadeite and carving.

The museum opened on September 27, in Pingzhou, Foshan City, one of the four most influential jade centres in China, known for specialising in raw materials, finished products, wholesale and retail. It was founded by Pan Susen and Hu Lihua, who both have decades of experience in the jade industry.

"The charm of jade is fully displayed here, giving the audience a three-dimensional visual experience and a more comprehensive understanding of jade culture," explains Lihong Huang, the museum's executive director. "We hope to become a platform bringing together artists and institutions and thus build a new cultural landmark, so that more people can understand jade culture."

In recent years, Steve Cherng, a Singapore-Taiwanese visual merchandiser and art director specialising in jewellery, has moved from store design to exhibitions. His latest project is the inaugural exhibition at Chen Treasure. "China has continuously strengthened its jewellery design and incubated the establishment of many jewellery art galleries and cultural centres," he says.

Around 90 miles away, the Shenzhen Jewelry Museum, which opened in 2019, is in the buzzing Shuibei jewellery district, where more than 2,000 jewellery companies are located. The museum also features five permanent exhibition areas, showcasing traditional Chinese craftsmanship, such as filigree inlay and gold bead granulation, through to contemporary design. One of these permanent displays, *Road of Shenzhen*, records 40 years of the Shenzhen jewellery industry; another features the work of famous brands from the Guangdong-Hong Kong — Macau Greater Bay Area.

The museum also hosts temporary exhibitions. The latest, *Olivine Love — Peridot's Life Journey*, in association with Fuli Gemstones, closes on Sunday. After that, *Diva! Italian Glamour in Fashion Jewellery*, which has travelled worldwide, will launch on November 1.

"In the future, Shenzhen Jewelry Museum will integrate popular science, education, art exchange and other museum functions, [and] gather and hold famous domestic and foreign jewellery brands," says Wang Zhen, the museum's director. "The three-year epidemic had a severe impact on all sectors of the world, but now there is a growing desire to 'get out there.'"

K11 Musea, at Victoria Docks in Hong Kong, a short distance from Shenzhen, is where Van Cleef & Arpels opened L'École School of Jewelry Arts, its first Asia-Pacific offshoot, in 2019. A second Asia-Pacific campus opened in Shanghai this week. Although more school than museum, the Hong Kong location has nearly 1,900 sq ft dedicated to exhibitions; its latest show, *Daniel Brush, an Edifying Journey: Gold, Aluminum, Steel*, has just closed.

"With every exhibition and programme, L'École seeks to bring meaningful learning experiences to the general public and being able to bring that to Hong Kong has been an amazing journey," says Olivier Segura, managing director of L'École Asia Pacific. He notes that the team has worked closely with a local collector in Hong Kong to assemble more than 50 diverse artefacts that will feature in the next exhibition, beginning mid-November. "It follows the Through the Eyes of a Connoisseur series, dedicated to the nuances of taste and the art of collecting," he says.

> 'We hope that more people can understand jade culture'

Across the Asia-Pacific region are other museums, founded by private collectors, which promote the local industry. Take the Gem and Jewelry Museum in Bangkok, run by the Gem and Jewelry Institute of Thailand (GIT). The museum has been closed since July, undergoing renovations, and is slated to reopen in early November. Established in 2002, it relocated in 2011 to the heart of Bangkok's gemstone trading district.

As well as an expansive gem and jewellery library that includes books, magazines and research papers, it also focuses on Thai jewellery, including Lanna-style silver, Sukhothai gold ornaments and nielloware.

"As part of the renovation, a diverse range of interactive media has been introduced to amplify the allure of the exhibitions," says Sumed Prasongpongchai, director of GIT. "These interactive elements aim to engage visitors on a deeper level, making the learning experience both informative and entertaining." They include what he describes as "captivating games" that will enable visitors to explore the gem industry's various processes, such as mining and cutting.

In 2004, when the World Jewellery Museum in Seoul, South Korea, was established as a private museum by Lee Kang-Won, a jewellery collector and wife of a diplomat, it was the first museum in Asia devoted to jewellery.

Exhibits from around the world include pre-Columbian gold jewellery, while the museum recently accepted a donation of contemporary Canadian jewellery, including works by Maryon Kantaroff, EB Cox and Gabriel Lucas that now reside in its permanent collection.

Today, the collection totals 2,800 pieces, displayed across three floors in nine galleries. Included in the permanent displays are Korean jewellery artists such as Kim Seunghee and Yun Sang-hee, and traditional Korean jewellery items such as norigae pendants.

The latest temporary exhibition, entitled *Love*, runs until November 3, 2024, featuring 50 rings from the museum's collection. Dating from the 1880s to 1980, they signify love and devotion, and range from traditional Korean wedding rings to Victorian mourning rings.

"The museum is in the process of digitising its collection and adding a digital layer on top of the existing exhibitions to provide a more interactive relationship with the collection," says co-director Elaine Kim, adding that, with 70 per cent of its visitors coming from overseas, the museum hopes in the future to create opportunities for collaborations with museums around the world to increase its reach even further.

Jacqueline Rabun: 'It took me years to develop my design language'

The American designer looks back at a lifetime of creativity, and offers advice to students. By *Caroline Palmer*

From top to bottom: Jacqueline Rabun; Georg Jensen silver and gold ring; Metanoia Torque gold necklace

Jacqueline Rabun is an American jewellery designer who has earned her place in the sun, both figuratively and literally. After more than 30 years in the UK, she is enjoying renewed inspiration in California, where she spent most of her early years while, in London, an extensive retrospective of her work celebrates her prodigious talent.

There are more than 250 pieces on show at the Carpenters Workshop Gallery in west London, with which she has collaborated since 2021. And out of this relationship has come one of her most recent collections: Metanoia, showcasing much that is special about her as a designer.

The collection includes torques and rings in both 18ct gold and silver, all set with a large gold-shot smooth, pebble-shaped piece of rutilated quartz. The shapes are large and sculptural, with a pared-back minimalism that exudes poetry and power, and comes alive when worn.

At the opening of the exhibition, late last month, Rabun was wearing the gold version — and, as striking a figure as she is, it was the neckpiece that first caught the eye. The show spans her 30-year career and, when looking across at what she produced during that time, Rabun says what stands out for her is "looking at my work in this amazing environment and to know that it was worth it. It was worth all the twists and turns. It looks like there's a certain ease to it all. But no, it doesn't come like that. I wish."

It did in the beginning, though. Rabun moved from the US to London in her twenties, in 1989, where she began making jewellery and opened a studio. Her first collection, Raw Elegance, was launched the following year and was snapped up by Barneys in New York and 10 Corso Como in Milan. Then, in 1992, her jewellery, a silver chain necklace and identity bracelet, was worn by supermodel Linda Evangelista on the cover of the September issue of Vogue.

"It was a thrill when I reflect on it," she says. "I think, 'Wow, that was amazing.' But, when you're in the moment and you're running a studio and all these things are happening around you, you don't quite take things in."

More recently, when going through her archive to select the pieces to be shown at the retrospective, Rabun says: "I was quite reluctant to bring out the early work. The current work, in terms of the language of design, is so me. It's more refined, considered and focused."

On reflection, she is pleased that she agreed for this phase of her work to be represented. "Perhaps if a student comes to see the retrospective they can see the journey and they can understand that it takes a long time to really develop your design language. It's not overnight. It took me years.

"You know when you've found it. You sort of fall in love with your own work. We love what we do. But it is a different thing loving it and falling in love with it. When you start to fall in love with it, then the world starts to really embrace it."

Rabun's early design influences came from London's subcultures: "Punk, Caribbean culture, African culture. You can see there's a lot of chains and beads coming together in my early work. It represented London's diversity."

It was among the chains of her earlier pieces that Rabun found the inspiration for her latest collaboration with jewellery and silver brand Georg Jensen. Her long-term relationship with the Danish company began in 1999 and has been a profound one for both parties. "Working with Georg Jensen has allowed me the space to really hone my designs. Also, it has an amazing studio where ideas are developed and the technical side of things — the craftsmanship, the quality," she says.

Rabun's collections for Georg Jensen — Offspring, Mercy and Reflect — "have all been very successful for the brand", she says.

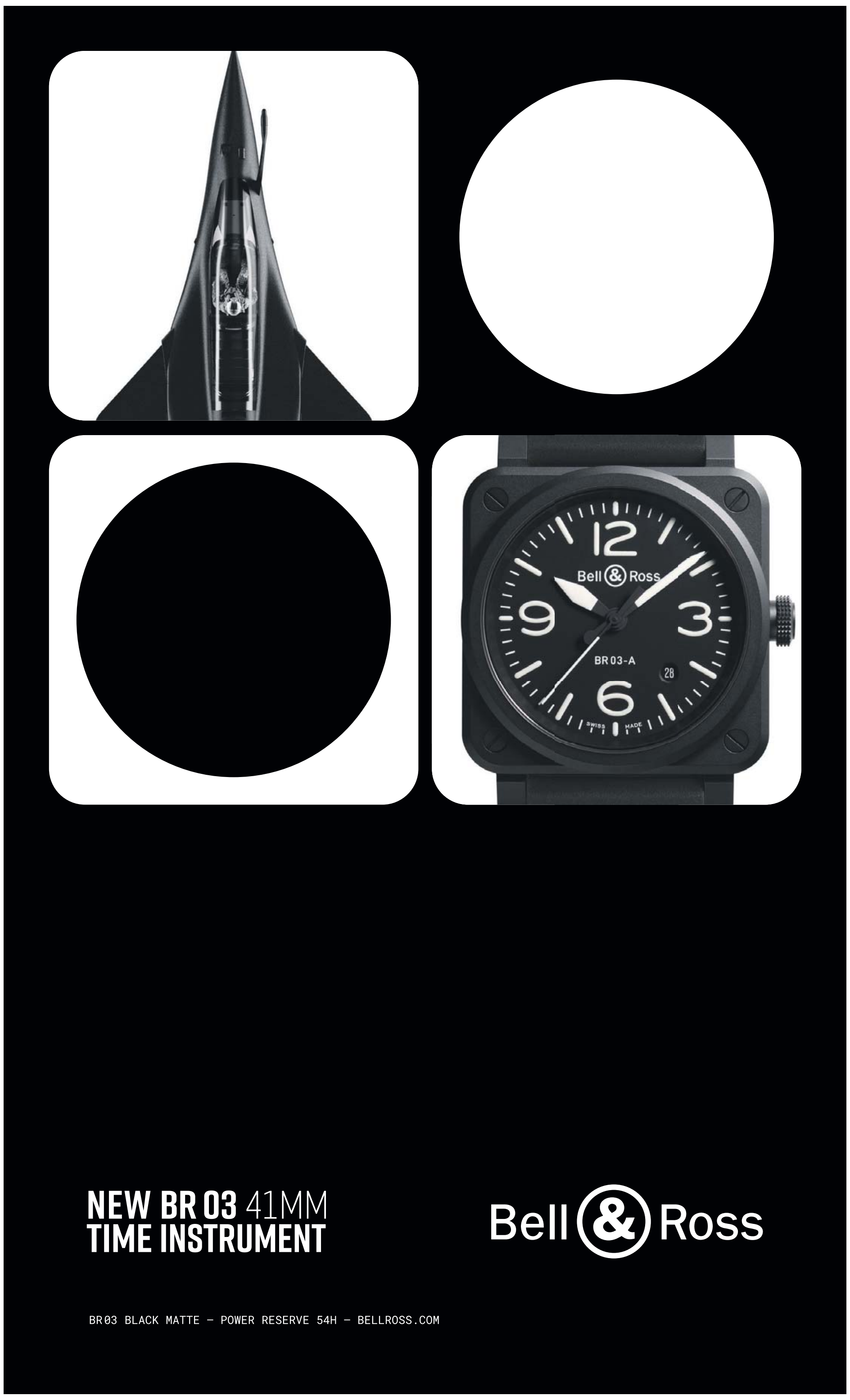
Reflect, a collection of gender-fluid jewellery and her most recent for the brand, is the one that has helped her reassess her earliest work and "really appreciate it". "One of the [early] bracelets in the exhibition was the inspiration for my Reflect collection, which reflects on the past and my time in London, my journey . . . and all that influenced my work. Taking that chain design and looking at it with fresh eyes and a Scandinavian sensibility."

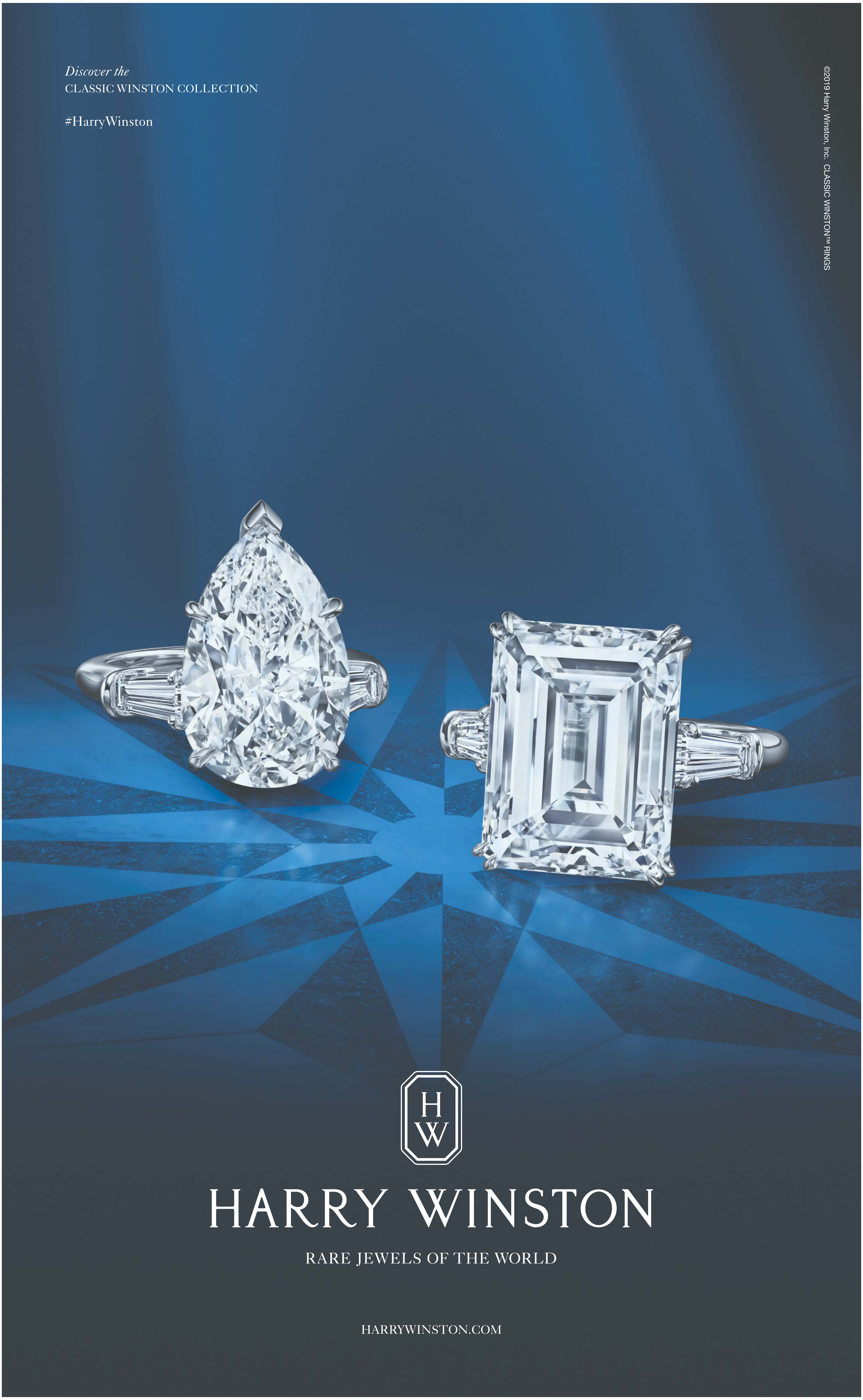
But there is more to Rabun's work than a stylish, minimalist aesthetic. She refers a lot to the challenges she has had in her life and to the empathy she feels for others and their stories. "I'm really a sensitive person; I really feel everything," she says. "And, because I'm made like that, it comes through my work. When I see situations in the world it affects me. It goes deep into my soul and comes out in my work."

This comes through in all her jewellery, including her Black Love collection under her own brand: talismanic pieces that celebrate "love, justice and equality".

For now, Rabun is focused on enjoying the Los Angeles sunshine, and creating a new show space and studio, while also "being grateful of why I am here, to share this gift that I've been given".

Jacqueline Rabun: A Retrospective, until November 18; Ladbroke Hall, 79 Barlby Road, London

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